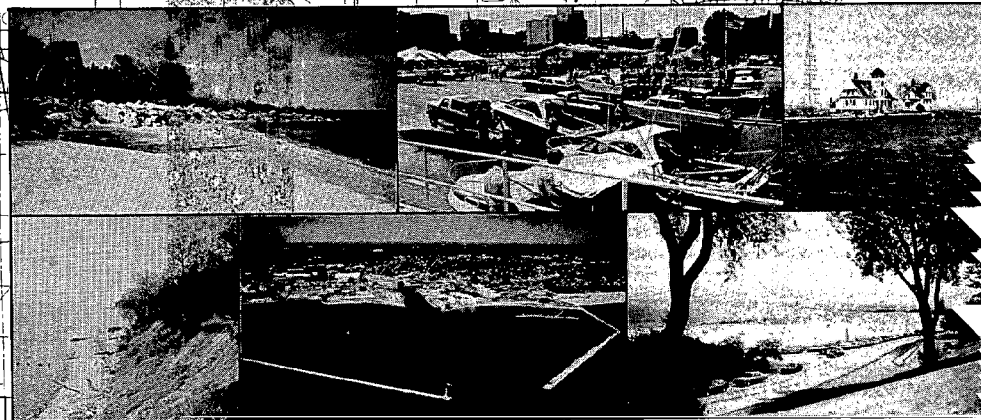


# A LAKE MICHIGAN PUBLIC ACCESS STUDY FOR RACINE COUNTY WISCONSIN



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sory Committee.

COMMUNITY ASSISTANCE PLANNING REPORT  
NUMBER 80

A LAKE MICHIGAN PUBLIC ACCESS STUDY  
FOR RACINE COUNTY, WISCONSIN

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September 1982

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September 21, 1982

Ladies and Gentlemen:

Racine County, in February 1981, submitted an application to the Wisconsin Coastal Management Council for a grant in partial support of the conduct of a Lake Michigan public access study and agreed to provide the necessary matching funds and in-kind services. Upon notification of grant approval, Racine County retained the Southeastern Wisconsin Regional Planning Commission as a consultant to the County for the project. The study was subsequently carried out by the staff of the Regional Planning Commission, working in cooperation with the staff of the Racine County Planning and Zoning Department and a technical advisory committee consisting of representatives of Racine County, the local units of government in the Lake Michigan shoreland area of Racine County, concerned citizen groups, and the Wisconsin Department of Natural Resources. Work on the study was initiated in January 1982, and completed on August 31, 1982. This report sets forth the findings and recommendations of the Racine County Lake Michigan public access study.

This study is concerned with the provision of opportunities for participation by the public in a wide range of outdoor recreation activities, both on Lake Michigan surface water and on adjacent shorelands in Racine County. The study sets forth recommended public access, outdoor recreation, and open space objectives and supporting standards relevant to the needs and values of the citizens of Racine County; presents pertinent information on the supply of, and the need for, public access sites and facilities, park and open space lands, and outdoor recreation facilities; and identifies the roles which the County and other units and agencies of government should play in meeting the public access and outdoor recreation and open space needs in the Lake Michigan shoreland area of Racine County.

Implementation of the plan presented in this report would, over time, provide an integrated system of park and open space sites along the Racine County Lake Michigan shoreline--a system that would serve to preserve and enhance the unique natural features of that shoreline, while providing opportunities for a wide range of high-quality recreational experiences for the residents of Racine County. The importance of the implementation of this plan to the overall quality of life within the County cannot be overemphasized. Much of the Racine County Lake Michigan shoreland has already been committed to intensive urban uses, and only isolated parcels of land remain in an undeveloped state. The very scarcity of remaining undeveloped shoreland areas and the continued pressure to develop these remaining areas for alternative uses underscores the need for the County and the municipalities concerned to act to provide for additional Lake Michigan access and to protect remaining natural resource features.

The Regional Planning Commission is pleased to have been able to be of assistance to the County in the completion of this study. The Commission stands ready, upon request, to assist the County and the constituent local units of government in the County in presenting the information and recommendations contained in this report to the public for its review and evaluation, and in adopting and implementing the recommendations contained in this report.

Sincerely,



Kurt W. Bauer  
Executive Director



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## Chapter I

### INTRODUCTION

#### BACKGROUND AND NEED FOR THE STUDY

The Lake Michigan shoreland is a unique area which provides an ideal setting for a variety of outdoor recreational activities. Recognizing this, Racine County and the coastal communities of Racine County have acquired significant portions of the Lake Michigan shoreline, thereby providing opportunities for nonriparian residents and other citizens as well as riparian owners to recreate within the coastal environment. Because of the extensive urban development which exists along the Lake Michigan shoreline of Racine County, however, there remains relatively little undeveloped shoreland which can be used to provide additional shoreland recreational opportunities in the future. Moreover, pressure to allocate remaining undeveloped shoreland to intensive urban land use threatens the availability of those lands for future recreation and open space use. The increasing competition for coastal resources in the face of the relative scarcity of undeveloped land within the coastal area suggests the need for a detailed public recreation access plan for the Racine County shoreland area. Without such a plan, opportunities for the provision of new shoreland recreation sites and facilities may be lost forever.

Given these concerns, Racine County, in February 1981, submitted an application to the Wisconsin Coastal Management Council for a grant in partial support of the conduct of a Lake Michigan public access study, and agreed to provide the necessary matching funds and in kind services. Upon notification of grant approval, Racine County retained the Southeastern Wisconsin Regional Planning Commission as a consultant to the County for the project. This study was subsequently carried out by the staff of the Regional Planning Commission, working in cooperation with the staff of the County Planning and Zoning Department and a technical advisory committee consisting of representatives from Racine County, the local units of government in the shoreland area, conservation groups, and the Wisconsin Department of Natural Resources. The members of the Racine County Lake Michigan Public Access Study Technical Advisory Committee are listed on the inside front cover of this report.

#### SCOPE OF THE STUDY

This study is concerned with the provision of opportunities for participation by the public in a broad range of outdoor recreational activities, both on Lake Michigan surface waters and on adjacent shorelands. Outdoor recreational activities in the coastal area range from swimming and sailboating to passive activities, such as sight-seeing from a scenic overlook. These activities may be broadly classified as "water-dependent" activities, which require direct access to surface waters, and "nonwater-dependent" activities, which do not require direct access to surface waters, but which may be significantly enhanced when pursued in a coastal environment. For purposes of this study, then, public access sites and facilities are defined as outdoor recreational sites and facilities--either publicly held, or privately held but open to the public--through which the public can participate in water-dependent and

nonwater-dependent outdoor recreational activities on Lake Michigan and adjacent shorelands. The following paragraphs indicate the specific activities, and related public access sites and facilities, which this study addresses.

### Water-Dependent Activities

As indicated above, water-dependent recreational activities are those which depend upon direct access to surface waters for their very existence. These include boating activities such as motorboating, sailboating, boat fishing, and--during calm periods--excursions in small, hand-carry boats; and non-boating activities such as swimming, shore fishing, and beach activities such as sunbathing and beachcombing. This study is concerned with the provision of sites and facilities to accommodate public participation in nonboating, water-dependent activities. The treatment of boat access facilities in this study is necessarily limited to a consideration of hand-carry boat launch facilities. Such facilities are intended to accommodate excursions in small, hand-carry boats when the lake is calm and can be provided outside harbors of refuge, as dictated by need and as permitted by shoreland conditions. Other forms of boating activity on Lake Michigan require boat launch ramps, slips, moorings, and associated harbors of refuge for protection from frequently rough Lake Michigan waters. A number of planning studies have already been conducted regarding the need for and provision of additional harbors of refuge and marina facilities at various locations along the Lake Michigan shoreline in Racine County. It is not within the scope of this study to refine or extend those studies. Rather, this study draws upon and incorporates, as appropriate, the findings and recommendations of previous work regarding recreational boating facilities along the Lake Michigan shoreline of Racine County.

### Nonwater-Dependent Activities

There are numerous outdoor recreational activities which do not require direct access to surface water but which are, nevertheless, significantly enhanced by a shoreland environment. These activities include camping, picnicking, and trail activities such as hiking, biking, and nature study, as well as general passive recreational pursuits. For such activities, the quality of the recreational experience depends in large measure on the presence of appropriate natural resource features. Participation in such activities can be significantly enhanced when related facilities--such as picnic areas, trail facilities, and camping facilities--are located adjacent to, or with a view of, Lake Michigan or other surface water. This study also analyzes needs and sets forth recommendations regarding the provision of sites and facilities to accommodate the aforementioned nonwater-dependent recreational activities within the Lake Michigan shoreland area.

### MAJOR ELEMENTS OF THE STUDY

The primary purpose of this study is the development of a plan to guide Racine County and the concerned units and agencies of government in the maintenance of existing, and the acquisition and development of new, sites and facilities to accommodate public recreational access--as defined above--to the Lake Michigan shoreland area of Racine County. To this end, the following specific work elements were undertaken as part of the Lake Michigan public access study.



## Collection and Analysis of Basic Data

The first step in the Lake Michigan public access study was the collection and analysis of basic data which should be considered in planning for public recreational access along the Lake Michigan shoreline. Certain data required for the study were collated--that is, gathered from existing sources. For example, information on the existing land use, population, and natural resource bases for the coastal zone was already available and was collated from Regional Planning Commission files. Certain special data collection activities were conducted under the study, including most importantly, an inventory of existing public access sites and an inventory of potential public access sites. As part of the inventory of existing public access sites, information was gathered for each existing public access site along the Lake Michigan shoreline in Racine County, including information regarding the size of the site and the type of facilities provided. Under the inventory of potential public access sites, information was gathered for those parcels of land along the Lake Michigan shoreline which have potential public recreational access use. This inventory of potential sites included the following information for each site: identification of general site characteristics, including natural resource features and physical development limitations such as unstable bluff conditions; identification of recreational activities and facilities which could potentially be accommodated; identification of site acquisition costs; and consideration of the impacts of public access use on adjacent lands.

## Formulation of Objectives and Standards and Analysis of Shoreland Access Site and Facility Needs

Lake Michigan public access objectives and related public access site and facility standards were formulated under the guidance of the Technical Advisory Committee, drawing upon relevant previous studies and plans, as appropriate. The need for additional public shoreland access sites and facilities was subsequently analyzed through the application of the recreational site and facility standards.

## Preparation and Evaluation of a Recommended Plan

Based upon the foregoing inventories and analyses, a recommended plan with respect to the provision of additional access sites and facilities along the Lake Michigan shoreline was prepared. This plan was evaluated, considering in particular the degree to which the established public access objectives and standards were met, as well as the attendant plan implementation costs to the concerned units and agencies of government. Upon development of a final recommended plan based upon the Technical Advisory Committee review, sketch plans were prepared for the sites which were proposed for acquisition and development.

## Preparation of Plan Implementation Recommendations

Following certification of the plan to the various local units and agencies of government concerned, implementation of the plan will be the responsibility of those local units and agencies of government. Accordingly, recommendations

regarding plan implementation activities for the concerned agencies and units of government were formulated under the study, and associated plan implementation costs were estimated. Approaches to plan implementation involving less than fee-simple acquisition of recommended sites were explored under the study.

In the conduct of the Lake Michigan public access study, it was recognized that a number of planning studies have been previously completed which deal directly, or indirectly, with the recreational use of the coastal area of Racine County. The Lake Michigan public access study drew upon the findings and recommendations of these previous studies, as appropriate. These studies include, importantly, the U. S. Army Corps of Engineers plan for the provision of recreational boating facilities in the Racine harbor, and the recreation activity management study for Cliffside Park and environs completed by a private consultant for Racine County. In addition, there has been considerable planning for the revitalization of the older, developed portions of the City of Racine, including the beautification of, and enhancement of access to, adjacent shoreland areas. A list of previous studies directly or indirectly concerned with public access to the Lake Michigan shoreline in Racine County is presented in Appendix A of this report.

It should be noted that the Racine County Lake Michigan public access study was conducted concurrently with a study of Lake Michigan waterfront parks undertaken by a private consultant for the City of Racine. The primary purpose of the City of Racine study was to prepare a detailed plan to guide the acquisition, development, and redevelopment of city waterfront parks in an effort to increase the accessibility, attractiveness, and continuity of the waterfront park system, particularly in areas adjacent to the Racine harbor and the Root River estuary. Representation of the City Parks Department on the Lake Michigan Public Access Study Technical Advisory Committee and interagency staff contacts provided the basis for coordination of the two concurrent planning programs.

## SCHEME OF PRESENTATION

The findings and recommendations of the Lake Michigan Public Access Study are set forth in this report. Following this introductory chapter, Chapter II presents a description of the Lake Michigan shoreland area of Racine County, including information regarding existing land use, the natural resource base, existing public access sites, and potential public access sites. Chapter III presents Lake Michigan public access objectives and standards. Chapter IV presents the analysis of needs for additional sites and facilities based upon an application of the public access objectives and standards formulated under this study. Chapter V presents the recommended Lake Michigan public access plan and identifies actions necessary for successful implementation of that plan. Chapter VI presents a summary of the findings and recommendations of the study.

## Chapter II

### A DESCRIPTION OF THE LAKE MICHIGAN SHORELAND AREA OF RACINE COUNTY

#### INTRODUCTION

The primary purpose of the Lake Michigan public access study is the development of a plan to guide Racine County and the concerned units and agencies of government within Racine County in the maintenance of existing, and acquisition and development of new, sites and facilities to accommodate public recreational access to the Lake Michigan shoreland area of the County. Preparation of such a plan requires consideration of the existing land use pattern and natural resource base of the shoreland area, including consideration of existing and potential outdoor recreation and open space sites. Accordingly, this chapter provides a description of the shoreland area, presenting in summary form pertinent basic information on the land use pattern and natural resource base as well as information on existing and potential outdoor recreation and open space sites.

Certain of the data presented herein, including the information on the existing and potential outdoor recreation sites, were collected through specially conducted inventories. Other data were collated, or gathered from existing sources. It should be noted in this regard that much information about the Lake Michigan shoreland area of Racine County was developed under the recently completed county shoreland development management study, and full use was made of the findings of that study in the conduct of the Lake Michigan public access study.<sup>1</sup> The shoreland development management study focused on the area of Racine County lying within approximately 1,000 feet of the ordinary high-water mark of Lake Michigan, and on certain lands located along the Root River east of the Marquette Street bridge (see Map 1).<sup>2</sup> In general, the area includes those lands which most directly affect, and are most affected by, Lake Michigan resources and processes. The same geographic area was adopted for use in the presentation of most of the inventory data contained in this chapter. Where appropriate, however, inventory data are also presented for adjacent inland portions of Racine County, such as the area along the Root River between the Marquette Street bridge and Horlick Dam, which were examined for potential Lake Michigan boat access sites (see Map 1).

This chapter consists of four sections. The first section presents a description of the existing land use base together with a description of the current zoning districts within the shoreland area. The second section presents a description of the existing natural resource base of the shoreland area.

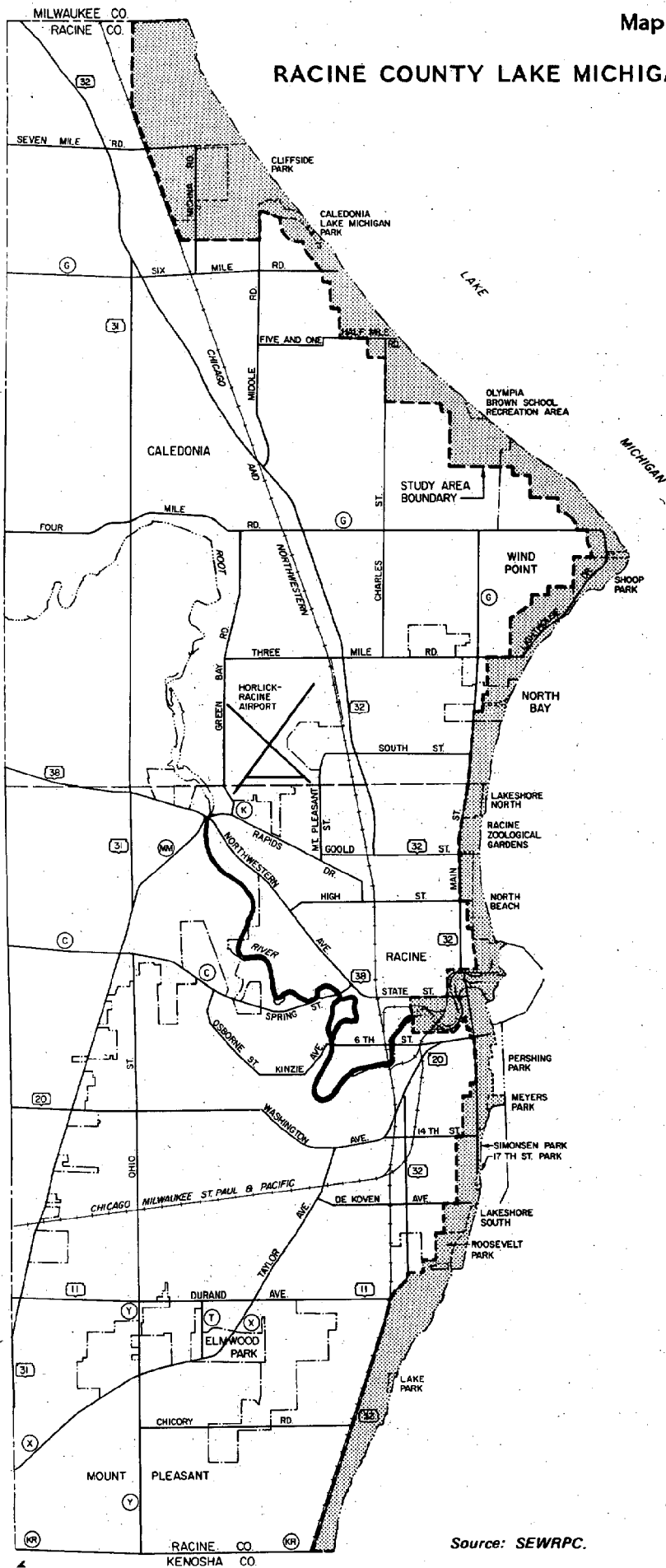
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<sup>1</sup>See SEWRPC Community Assistance Planning Report No. 73, A Shoreland Development Management Study for Racine County, Wisconsin.

<sup>2</sup>The actual study area boundary consists of the man-made or natural physical features lying closest to a line 1,000 feet from the ordinary high water mark of Lake Michigan. Along several reaches of the study area in the northern portion of the County, real property lines were used as the study area boundary, owing to the absence of major physical features near the shoreline.

Map 1

RACINE COUNTY LAKE MICHIGAN SHORELAND STUDY AREA



LEGEND

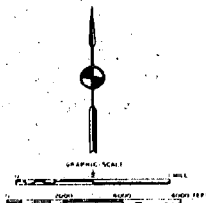


STUDY AREA



REACH OF THE ROOT RIVER  
EXAMINED FOR POTENTIAL  
LAKE MICHIGAN BOAT  
ACCESS SITES

Source: SEWRPC.



The third section presents information on the existing and potential outdoor recreation and open space sites, historic sites, and natural areas existing within the shoreland area. The fourth and final section presents a description of the environmental corridor along the Lake Michigan shoreline in Racine County.

## LAND USE BASE

An understanding of the existing and locally proposed land use patterns in the shoreland area is essential to the development of a shoreland public access plan. Accordingly, this section presents a description of the existing land use and the existing zoning within the shoreland area.

### Existing Land Use

As shown on Map 2, much of the Lake Michigan shoreland area of Racine County has been committed to intensive urban land uses, and few undeveloped open lands remain within the shoreland area. By 1950, urban development in the shoreland area extended south to Chicory Road and north to Lombard Avenue. By 1963, urban development extended to County Line Road on the south and to Three Mile Road on the north. Also between 1950 and 1963, large tracts of residential land were developed along the Lake Michigan shoreline in the Village of Wind Point and in the Town of Caledonia, including the Crestview subdivision and the area immediately south of Crestview. Since 1963, open space lands along the Lake Michigan shoreline have continued to be converted to urban use. The largest remaining undeveloped tracts of land are presently found in the northern portion of the shoreland area.

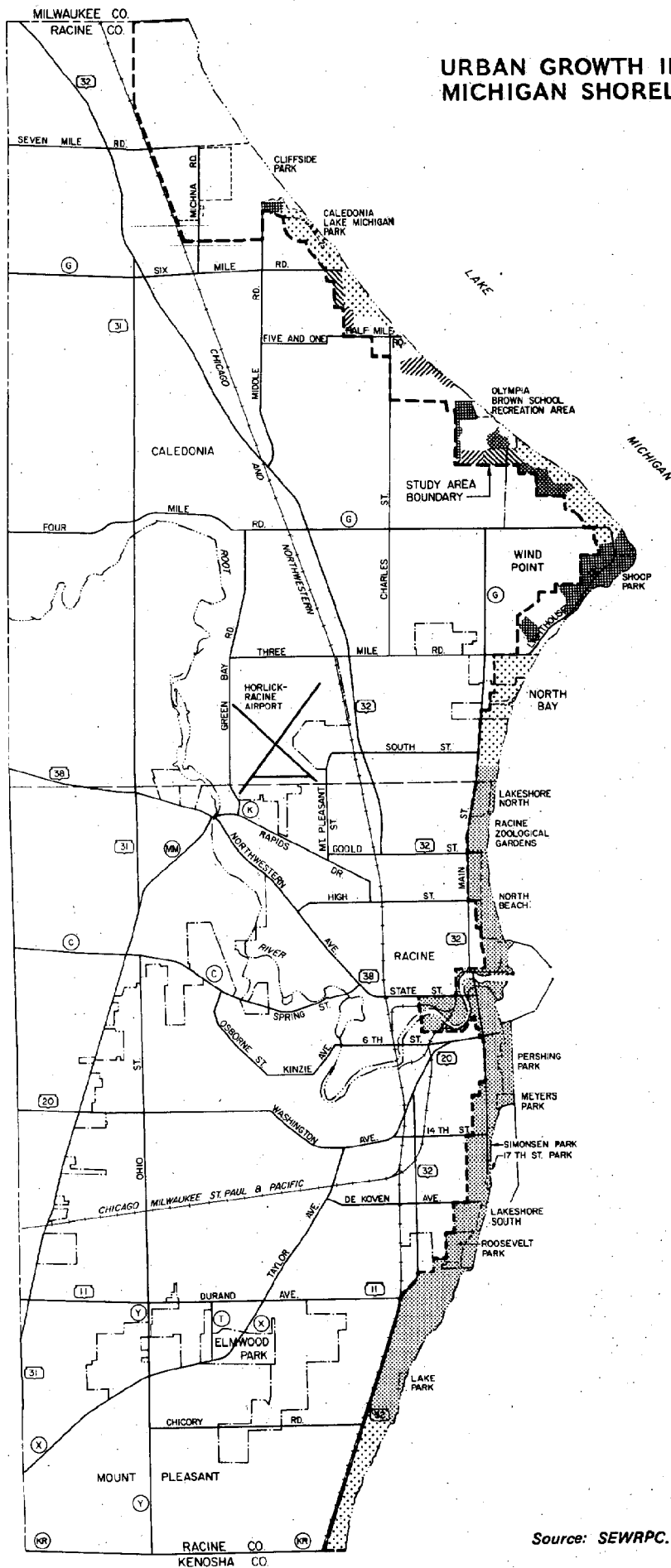
The type and spatial distribution of major categories of land use existing within the shoreland area of Racine County in 1980 are summarized on Map 3. The areal extent of the land use categories within the shoreland study area, which encompasses a total of 2,552 acres, is presented in Table 1. As shown on Map 3, and indicated in Table 1, a significant portion of the shoreland study area--1,429 acres, or 56 percent of the total area--was devoted to urban uses in 1980, including residential; commercial; industrial; transportation, communication, and utility; and governmental and institutional uses. Of these urban land uses, residential comprises the largest portion--695 acres, or 49 percent of the urban area. Recreational uses comprised an additional 414 acres, or 16 percent of the total study area. Of the total recreational uses, 396 acres, or 96 percent, are in public ownership, while the remainder are in private ownership. Remaining undeveloped lands, including wetlands, woodlands, and agricultural and other open lands, encompassed 672 acres, or 26 percent of the total area. Surface water, consisting primarily of the Root River, accounted for the balance--37 acres, or about 2 percent--of the total shoreland study area.

### Existing Zoning

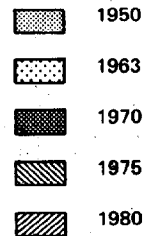
Zoning ordinances and attendant zoning district maps provide an important expression of community land use development objectives. Zoning ordinances are presently in effect in each of the five minor civil divisions which have

Map 2

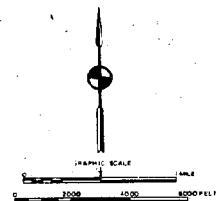
# URBAN GROWTH IN THE RACINE COUNTY LAKE MICHIGAN SHORELAND STUDY AREA: 1950-1980



## LEGEND



Source: SEWRPC.



Map 3

# LAND USE IN THE RACINE COUNTY LAKE MICHIGAN SHORELAND STUDY AREA: 1980

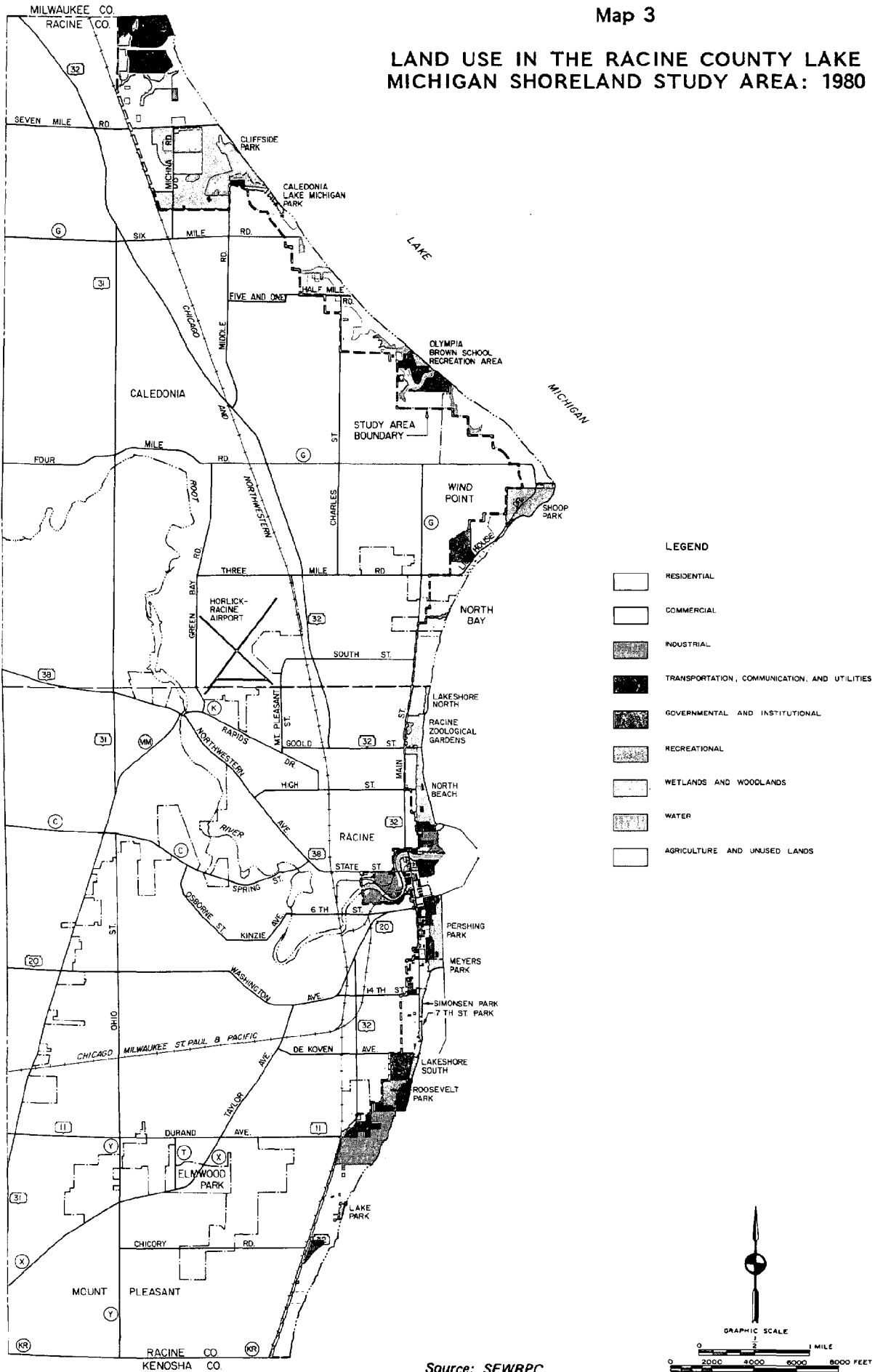


Table 1

EXISTING LAND USE IN THE RACINE COUNTY  
LAKE MICHIGAN SHORELAND STUDY AREA: 1980

Land Use Category	Land Use	
	Acres	Percent of Total
Residential.....	695	27.3
Commercial.....	47	1.8
Industrial.....	130	5.1
Transportation, Communication, and Utilities <sup>a</sup> .....	373	14.6
Governmental and Institutional.....	184	7.2
Total Urban Uses	1,429	56.0
Recreational <sup>b</sup> .....	414	16.2
Wetlands.....	50	2.0
Woodlands.....	146	5.7
Agricultural and Other Open Lands.....	476	18.7
Water.....	37	1.4
Total	2,552	100.0

<sup>a</sup> Includes off-street parking, terminals, communication facilities, and utilities.

<sup>b</sup> Excludes wetlands, woodlands, and off-street parking within existing park and outdoor recreation sites.

Source: SEWRPC.

jurisdiction in the Lake Michigan shoreland area of Racine County. The City of Racine, the Villages of North Bay and Wind Point, and the Town of Mt. Pleasant have adopted and currently administer their own zoning ordinances. The Town of Caledonia has adopted the Racine County zoning ordinance which is administered for the Town of Caledonia by the Racine County Planning and Zoning Department. The Village of Wind Point is currently in the process of preparing a new zoning ordinance and zoning district map.

Generalized existing zoning districts within the shoreland area are shown on Map 4. Table 2 presents the areas by various zoning districts.

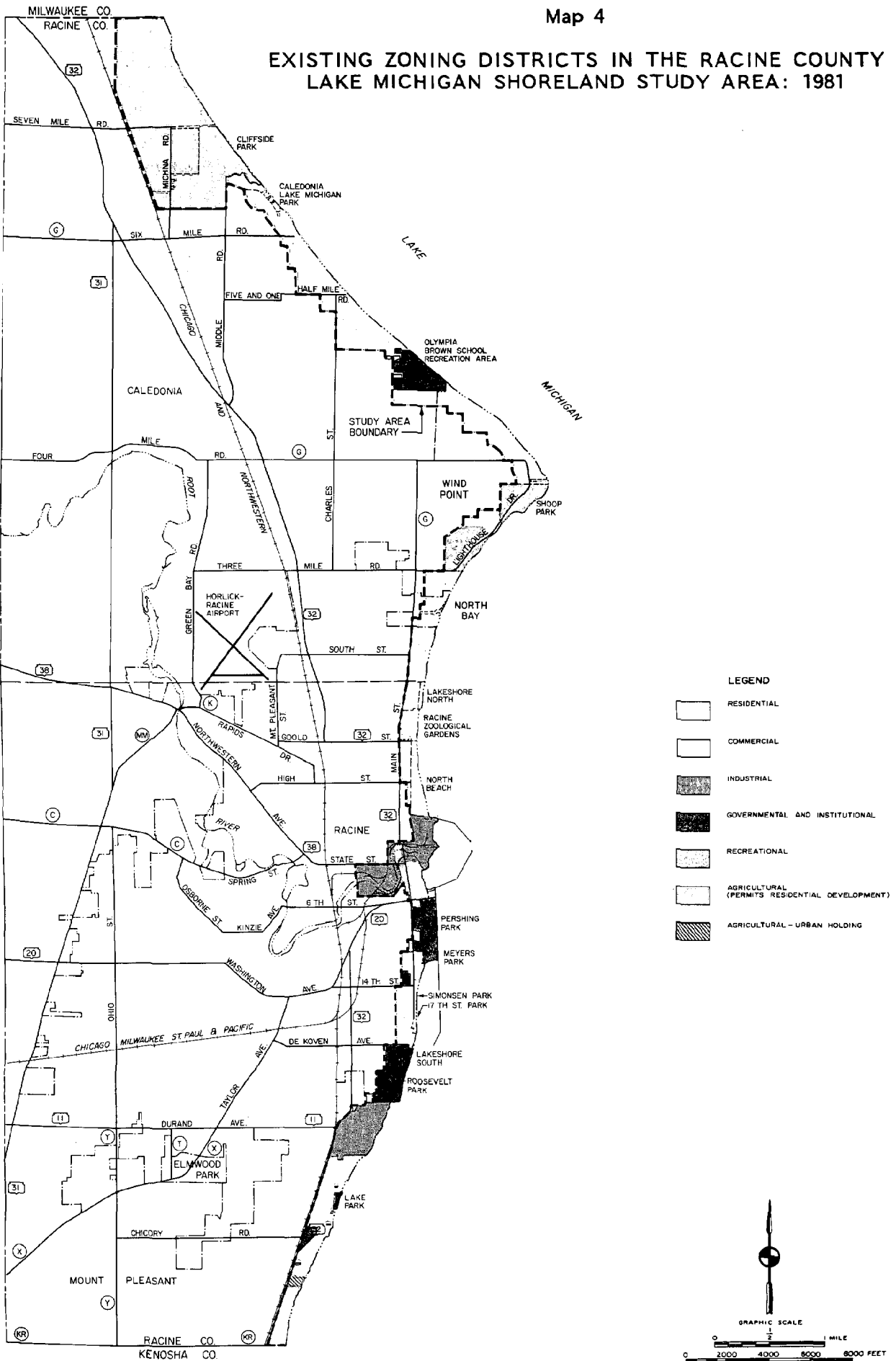
A large portion of the shoreland area has been placed in zoning districts which permit urban development--a finding which is not surprising given the highly developed nature of the study area. As indicated in Table 2, a total of 2,331 acres, or about 91 percent of the shoreland study area, has been placed in zoning districts which permit residential, commercial, industrial, and governmental and institutional development. The largest single zoning category is residential which accounts for 1,094 acres, or 43 percent of the shoreland study area. Lands placed in districts which allow urban development account for about 13.6 linear miles, or 95 percent of the total Lake Michigan shoreline in Racine County.

Of particular importance in the analysis of local zoning within the shoreland area is the zoning of the remaining wetlands, woodlands, and other lands



Map 4

# EXISTING ZONING DISTRICTS IN THE RACINE COUNTY LAKE MICHIGAN SHORELAND STUDY AREA: 1981



Source: Racine County Planning and Zoning Department and SEWRPC.

Table 2

## EXISTING ZONING IN THE RACINE COUNTY LAKE MICHIGAN SHORELAND STUDY AREA: 1981

	Town of Caledonia				Town of Mt. Pleasant				City of Racine			
	Area		Frontage on Lake Michigan		Area		Frontage on Lake Michigan		Area		Frontage on Lake Michigan	
	Acres	Percent	Linear Miles	Percent	Acres	Percent	Linear Miles	Percent	Acres	Percent	Linear Miles	Percent
General Zoning District <sup>a</sup>												
Districts Which Permit												
Urban Development	343	29.0	1.91	45.8	179	57.2	1.64	66.1	321	48.2	2.82	57.0
Residential	6	0.5	--	--	7	2.2	--	--	64	9.6	0.28	5.7
Commercial	--	--	--	--	106	33.9	0.61	24.6	136	20.4	0.66	13.3
Industrial	--	--	--	--	--	--	--	--	--	--	--	--
Governmental and Institutional	77	6.5	0.45	10.8	14	4.5	0.15	6.1	145	21.8	1.19	24.0
Agricultural	546	46.0	1.10	26.4	--	--	--	--	--	--	--	--
Subtotal	972	82.0	3.46	83.0	306	97.8	2.40	96.8	666	100.0	4.95	100.0
Districts Which Prohibit												
Urban Development	--	--	--	--	--	--	--	--	--	--	--	--
Agricultural-Urban Holding District	214	18.0	0.71	17.0	7	2.2	0.08	3.2	--	--	--	--
Recreational	--	--	--	--	--	--	--	--	--	--	--	--
Subtotal	214	18.0	0.71	17.0	7	2.2	0.08	3.2	--	--	--	--
Total	1,186	100.0	4.17	100.0	313	100.0	2.48	100.0	666	100.0	4.95	100.0
Village of North Bay												
Study Area Total												
Village of Wind Point												
General Zoning District <sup>a</sup>												
Districts Which Permit												
Urban Development	210	60.7	1.48	60.2	41	100.0	0.30	100.0	1,094	42.9	8.15	56.8
Residential	--	--	--	--	--	--	--	--	77	3.0	0.28	1.9
Commercial	--	--	--	--	--	--	--	--	242	9.5	1.27	8.8
Industrial	--	--	--	--	--	--	--	--	--	--	--	--
Governmental and Institutional	--	--	--	--	--	--	--	--	236	9.2	1.79	12.5
Agricultural	136	39.3	0.98	39.8	--	--	--	--	682	26.7	2.08	14.5
Subtotal	346	100.0	2.46	100.0	41	100.0	0.30	100.0	2,331	91.3	13.57	94.5
Districts Which Prohibit												
Urban Development	--	--	--	--	--	--	--	--	--	--	--	--
Agricultural-Urban Holding District	--	--	--	--	--	--	--	--	7	0.3	0.08	0.6
Recreational	--	--	--	--	--	--	--	--	214	8.4	0.71	4.9
Subtotal	--	--	--	--	--	--	--	--	221	8.7	0.79	5.5
Total	346	100.0	2.46	100.0	41	100.0	0.30	100.0	2,552	100.0	14.36	100.0

<sup>a</sup>The zoning district categories are generalized categories. The residential category on Map 4 includes the R1, R2, R3, R4, and R5 Districts of the City of Racine zoning ordinance; the R40E, R100, and R40E Districts of the Town of Mt. Pleasant zoning ordinance; the R40E, R100, and R40E Districts of the Village of North Bay and Wind Point. The commercial category on Map 4 includes the B1, B2, B3, B4, B5, and B6 Districts of the City of Racine zoning ordinance; the B1 District of the Town of Mt. Pleasant zoning ordinance; and the B1, B2, B3, B4, B5, and B6 Districts of the Village of North Bay and Wind Point. The industrial category on Map 4 includes the I1 District of the City of Racine zoning ordinance; the I1 District of the Town of Mt. Pleasant zoning ordinance; and the I1 District of the Village of North Bay and Wind Point. The recreational category on Map 4 includes the R1 District of the City of Racine zoning ordinance; the R1 District of the Town of Mt. Pleasant zoning ordinance; and the R1 District of the Village of North Bay and Wind Point. The agricultural category on Map 4 includes the A1 District of the City of Racine zoning ordinance; the A1 District of the Town of Mt. Pleasant zoning ordinance; and the A1 District of the Village of North Bay and Wind Point. The agricultural-urban holding category on Map 4 includes the AUH District of the Town of Mt. Pleasant zoning ordinance.

Source: Racine County Planning and Zoning Department and SEWRPC.

# Wisconsin Coastal Management Program

## Progress Report

For WCMP Staff Use

WCMP Project Number:

822.7

Date Received:

AD-CM 4(5/80)

Submit this Progress Report to: Wisconsin Dept. of Administration  
Office of Coastal Management  
101 S. Webster Street, 7th Floor  
Madison, WI 53702

Project Title: <b>Lake Michigan Public Access Study</b>		Purchase Order Number: <b>ADB-01041</b>	
Project Duration in MONTHS: <b>Twelve</b>		Report Period From: <b>July 1, 1982</b> To: <b>August 31, 1982</b>	
Project Type (Check one or more):  <input type="checkbox"/> Improve SCA Management SCA Number _____ <input type="checkbox"/> Implement State Law <input type="checkbox"/> CEIP (Coastal Energy Impact Project) <input type="checkbox"/> Demonstration <input checked="" type="checkbox"/> Other Public Access 2B		CMP funds spent to date: <b>\$24,000.00</b>	% of Budgeted funds: <b>100%</b>
		Match spent to date: <b>\$9,500.00</b>	% of budgeted funds: <b>100%</b>
		Signature of project manager:	

### 1. Objectives of Project (as contracted):

- 1) To bring together existing data relating to land uses along the Racine County Coastline;
- 2) To determine access locations and availability;
- 3) To determine methods of acquisition and alternatives to acquisition of shoreland;
- 4) To analyze various access uses and needs as they relate to public trends in rural and urban environments;
- 5) To develop a plan coordinating access locations to uses and/or needs
- 6) To make recommendations to enhance existing access locations and the development of potential access locations, and;
- 7) Provide both long term and short term implementation recommendations to the jurisdictional agencies.

### 2. Thoroughly discuss progress made toward accomplishing objectives during this reporting period:

The Racine County Technical Advisory Committee met on July 8, 1982, to review and discuss Chapter Three and Chapter Four of the study report. Chapter Three "Objectives, Principles, and Standards" identifies seven park and open space preservation, acquisition, and development objectives for use in the formulation and evaluation of the Racine County Lake Michigan Shoreland public access plan. The Chapter further identifies shoreland recreational facility standards, swimming, beach activities and passive recreation, and trail and route activities.

Chapter four "Application of Objectives, Principles, and Standards", examines existing probable future population levels, application of resource-oriented site and facility standards, application of urban site and facility standards, and additional Lake Michigan access requirements.

On August 31, 1982, the Committee met to review and discuss Chapter Five and Chapter Six of the study report. Chapter five identifies the

Since the previous progress report, there are no problems encountered by the Regional Planning Commission staff or Racine County Planning and Zoning staff during the conduct of this study. A copy of the final report will be submitted to the Coastal Management Program on September 8, 1982. The final print and bound copies will be submitted the first week of October.

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4. Impact thus far, if any, of the project on the shoreline, coastal resources, or coastal residents:

A statement of impact on the coastal area is identified in the study.

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Signature of person authorized to receive funds:

having potential for outdoor recreation and open space use. Comparison of Maps 3 and 4 indicates that most of the remaining wetland, woodland, and other undeveloped lands within the shoreland area have been placed in zoning districts which allow residential development and are, therefore, subject to conversion to urban use. A further discussion of the existing zoning and other land use regulations in effect in the shoreland area, together with recommendations for modifications of those regulations to facilitate implementation of a shoreland public access plan, is presented in Chapter V of this report.

## NATURAL RESOURCE BASE

The proper management of the natural resource base is essential to the provision of good outdoor recreation facilities, the maintenance of a healthy environment for all forms of life, and the maintenance of the natural heritage and beauty of an area. The most important remaining natural features of the Racine County Lake Michigan shoreland area are located between Shoop Park in the Village of Wind Point and the north county line. It is important to recognize, however, that the entire Lake Michigan shoreland, including the developed area of that shoreland, has important underlying ecological, scenic, and recreational values. The principal elements of the natural resource base of the shoreland area--including beaches, bluffs, surface water, floodlands, wetlands, woodlands, and wildlife habitat area--are described below.

### Beaches

A beach may be defined as an area of unconsolidated material which extends landward from the ordinary low-water line to the line marking a distinct change in physiographic form, or the beginning of permanent terrestrial vegetation. Beaches in Racine County generally consist of sand and gravel, but in some places are covered with artificial fill. They generally range in width from a few feet up to 40 feet or more. The widest beach--approximately 400 feet--is located north of the northern breakwater of the Racine harbor. Conversely, beaches are nonexistent along many reaches of the shoreline, either as a result of the topography, hydrography, and water action, or as a result of man's activity--particularly the construction of shoreline structures, such as bulkheads or other shoreline stabilization structures. The characteristics of the various reaches of beach along the Lake Michigan shoreline of Racine County are presented in Table 3.

The features of a beach and the materials composing a beach are in a continuous state of flux as a result of the onshore and offshore transport of sand and gravel by current and wave action. There is a constantly changing interplay between the forces that bring sand ashore and those that move it lakeward, with the position and configuration of the main mass of sand at any point in time serving as an index of the dominant forces. High, deep waves typical of major storm events within the coastal area of southeastern Wisconsin tend to tear beaches down by removing material from them and transporting it in a lakeward direction. In contrast, the small waves characteristic of periods between storm events tend to build up beaches through a net landward transport of sediment.

Sediment is also transported parallel to the shoreline by longshore currents. Longshore currents are currents in the breaker zone generally running parallel

Table 3

**BEACH CHARACTERISTICS ALONG THE RACINE  
COUNTY LAKE MICHIGAN SHORELINE**

Shoreline Reach-- Identified by U. S. Public Land Survey Town, Range, and Section <sup>a</sup>	Width	Beach Materials
T4N, R23E, Section 6	Generally less than 15 feet; no beach in northern portion	Sand, gravel, boulders
T4N, R23E, Sections 7-8	Generally between a few feet and 20 feet	Sand, gravel; slump blocks typically cover portions of beach
T4N, R23E, Sections 16-17	Generally between 15 and 40 feet	Sand, gravel, pebbles, cobbles
T4N, R23E, Sections 21-22	Generally between 30 and 40 feet in northern portion; between 20 and 50 feet in southern portion	Sand, pebbles, cobbles, revetment on beach at some points
T4N, R23E, Section 27	Generally between a few feet and 65 feet; varies considerably from reach to reach	Sand, gravel, pebbles, cobbles
T4N, R23E, Sections 33-34	Generally between a few feet and 65 feet; varies considerably from reach to reach	Sand, pebbles, gravel
T3N, R23E, Section 4	Up to 400 feet in southern portion, generally less than 40 feet in northern portion	Sand in southern portion; sand and gravel in northern portion
T3N, R23E, Section 9	No beach south of or within harbor; between 400 and 500 feet north of harbor	Sand north of harbor breakwater
T3N, R23E, Section 16	No beach in southern portion; between 50 and 100 feet at Meyers Park; no beach in northern portion	Sand, gravel, and boulders in southern portion; boulders and gravel in northern portion
T3N, R23E, Section 21	No beach	--
T3N, R23E, Sections 28-29	Generally 10 feet or less; no beach in some reaches	Cobbles and pebbles in southern portion; bricks, broken concrete, stone, and wood in northern portion
T3N, R23E, Section 32	Generally between five and 20 feet; no beach in some reaches	Sand, gravel

<sup>a</sup>The location of the U. S. Public Land Survey Section is presented graphically in Figure 1.

Source: Shore Erosion Study conducted under the Wisconsin Coastal Management Program and SEWRPC.

to the shoreline and usually caused by waves breaking at an angle to the shoreline. Longshore currents transport sediment and other particulate matter--which is suspended in the current or rolled along the lake bottom--parallel to the shore. While the long shore currents within the coastal zone of southeastern Wisconsin may move in either a northerly or a southerly direction in response to the direction of the incident waves, the net sediment transport is to the south. Evidence of this fact is the tendency for beaches to exhibit accretion on the north side of groins, piers, and other similar structures while erosion occurs on the southerly side of such structures.

### Bluffs

Much of the Lake Michigan coastline in Racine County consists of bluffs formed from glacial deposits of silty clay overlain by lakebed deposits of fine sand, silt, and clay with a second layer of glacial silt covering the deposits in certain locations.<sup>3</sup> Along the shoreline south of Pershing Park, the bluffs generally range in height from 30 to 40 feet (see Figure 1). Along the shoreline between the northern breakwater of the Racine harbor and Six-Mile Road in the Town of Caledonia, the height of the coastal bluffs varies considerably, but is generally less than 40 feet. North of Six-Mile Road the bluff heights increase considerably, with bluffs of more than 80 feet in height found along the shoreline north of Cliffside Park. Typically, the coastal bluffs in Racine County extend to the water's edge or to the edge of a narrow beach area parallel to the water's edge. Notable exceptions occur at Pershing Park, North Beach, the Racine sewage treatment plant, and the Wisconsin Electric Company site where extensive areas of natural or man-made land exist between the base of the bluff and the water's edge.

Shoreline Erosion: Erosion is a major problem along portions of the Lake Michigan shoreline in Racine County. Both beach and bluff erosion problems exist. Bluff erosion is of particular concern because of the threat it poses to human life and property. Bluff erosion is, moreover, a major consideration in the evaluation of the recreational development potential of remaining open space lands along the Lake Michigan shoreline.

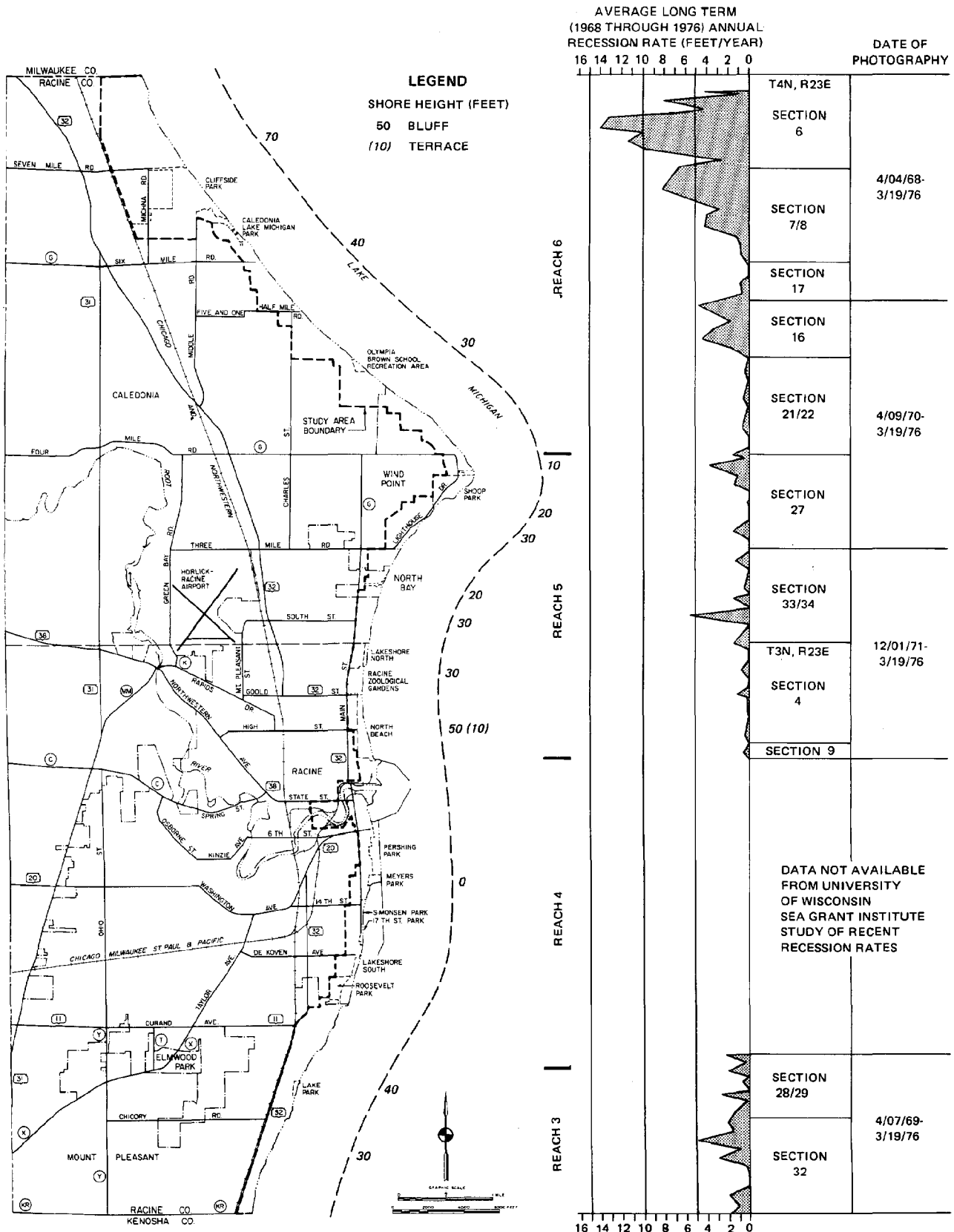
Bluff erosion is the process by which natural forces, sometimes accelerated or decelerated by man's activities, result in the intermittent and occasionally massive recession of the top of the bluff. The stability of a coastal bluff at any given location is dependent upon a number of factors, some of them natural and some of them related to man's activities. The stability of a bluff is affected by the basic characteristics of the bluff itself, including the bluff slope, the type of materials comprising the bluff, and the amount and location of groundwater within the bluff; surface water runoff; wave action at the toe of the bluff; lake level; the scouring action of ice blocks during the late winter ice breakup period; repeated freezing and thawing and wetting and drying, which tends to break down soil structure and reduce the strength of bluff surface layers; the extent of vegetative cover; and the extent of urban development, which increases stress within the bluff and thereby contributes to bluff failure.

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<sup>3</sup>J. Philip Keillor and Robert De Groot, Recent Recession of Lake Michigan Shorelines in Racine County, Wisconsin, University of Wisconsin, Sea Grant Institute, 1978.

Figure 1

# BLUFF CHARACTERISTICS ALONG THE RACINE COUNTY LAKE MICHIGAN SHORELINE



Source: University of Wisconsin, Sea Grant Institute, and SEWRPC.



There is considerable variation in bluff recession rates along the Lake Michigan shoreline of Racine County. These rates, moreover, vary with time as well as with lake levels and weather conditions. The most recent study of shoreline recession rates in Racine County was conducted by the University of Wisconsin, Sea Grant Institute for the Racine County Coastal Management Program Technical Advisory Committee.<sup>4</sup> This study provides detailed documentation of shoreline recession along the Racine County coastline over the period from 1968 to 1976.<sup>5</sup> The recession rates identified under the University of Wisconsin, Sea Grant Institute study are indicated on Figure 1. As indicated on this figure, the most rapid shoreline recession has occurred in the reach bordered by the high bluffs in the northern portion of the shoreland area--particularly the area north of Six-Mile Road. At one point along this reach, the bluff edge receded at a rate of more than 14 feet per year during the observation period. Conversely, recent bluff recession rates have generally been less than six feet per year along the balance of the shoreline in the County, with certain well-protected reaches, particularly within the City of Racine, experiencing no measurable shoreline recession.

Bluff failure poses serious problems for both developed and undeveloped portions of the Racine County coastline. Of foremost concern in developed areas is the danger to the safety of residents of houses located close to receding bluffs and the potential loss of public and private property. In addition, slope failure is a threat to undeveloped land, both public and private, along certain portions of the coastline of the County. Some of the most severe erosion hazards in both the developed and undeveloped portions of the coastal area are highlighted below.

Selected Erosion Hazards in Developed Portions of the Study Area:

1. City of Racine: Two reaches have been identified as particularly subject to shoreline erosion in the City of Racine. One is the reach between William Street and Augusta Street, north of the City of Racine Zoological Gardens. The City has applied for U. S. Army Corps of Engineers assistance in installing shoreline protection structures along this reach. The second reach extends from 14th Street to a point south of 16th Street--the erosion problems here being associated with a gap in the harbor breakwater to the east.
2. Town of Caledonia: The highest recent recession rates in Racine County, which are among the highest recession rates along the Lake Michigan

<sup>4</sup>Ibid, Footnote 3.

<sup>5</sup>The University of Wisconsin, Sea Grant Institute study calculated recession rates by comparing the location of the bluff edge as it appeared on 1976 aerial photographs with the location of the bluff edge as it appeared on previous aerial photographs. The dates of the "base-line" photography--between April 1968 and December 1971--varied by coastal reach. It should be noted that the Keillor-DeGroot study includes the period during the early and mid-1970's when Lake Michigan levels rose to record heights--a period during which rising lake levels made bluffs and beaches increasingly susceptible to wave attack--and followed a period during the mid-1960's when lake levels had fallen to record lows. Moreover, the lake level was increasing between 1968 and 1971--the span of the base-line photography--and, therefore, several coastal reaches in the County were not observed under identical conditions.

shoreline in Wisconsin, have been observed in the shoreline area north of Six-Mile Road. This area includes the Town of Caledonia Lake Michigan Park, the Crestview subdivision, Cliffside County Park, the National Guard target range, and private open space lands. With respect to property damage, the most imminent problem is the threat posed by bluff recession to Lake Shore Drive, associated utility lines, and, ultimately, to residences within the Crestview subdivision. Recognizing the serious nature of the erosion hazard, the Town of Caledonia has acquired through donation most of the private property located east of Lake Shore Drive adjacent to the Crestview subdivision, and proposed to undertake efforts to stabilize the bluff.

3. Town of Mt. Pleasant: Bluff erosion poses a threat to public and private property in the Lake Park neighborhood of the Town of Mt. Pleasant, including several residences, a town park, a fire station, and a number of street ends. In addition, public roads, including utilities and communications facilities within the road rights-of-way, are also threatened by bluff erosion.

#### Selected Erosion Hazards in Undeveloped Portions of the Study Area:

1. Town of Caledonia: Bluff recession threatens to decrease the area of Cliffside Park and the undeveloped open space lands to the north. Racine County has studied the erosion problem at Cliffside Park and has developed several erosion control alternatives. Because of the high costs of these alternatives and the fact that the area affected is undeveloped, Racine County has postponed any actions to implement the erosion abatement plans.
2. Town of Caledonia: The U. S. Army Corps of Engineers has completed plans for the stabilization of the bluff at the National Guard target range. This effort, which involves the installation of riprap along the toe of the bluff, is being undertaken to prevent eroding fly ash berms at the National Guard site from entering and polluting Lake Michigan waters.

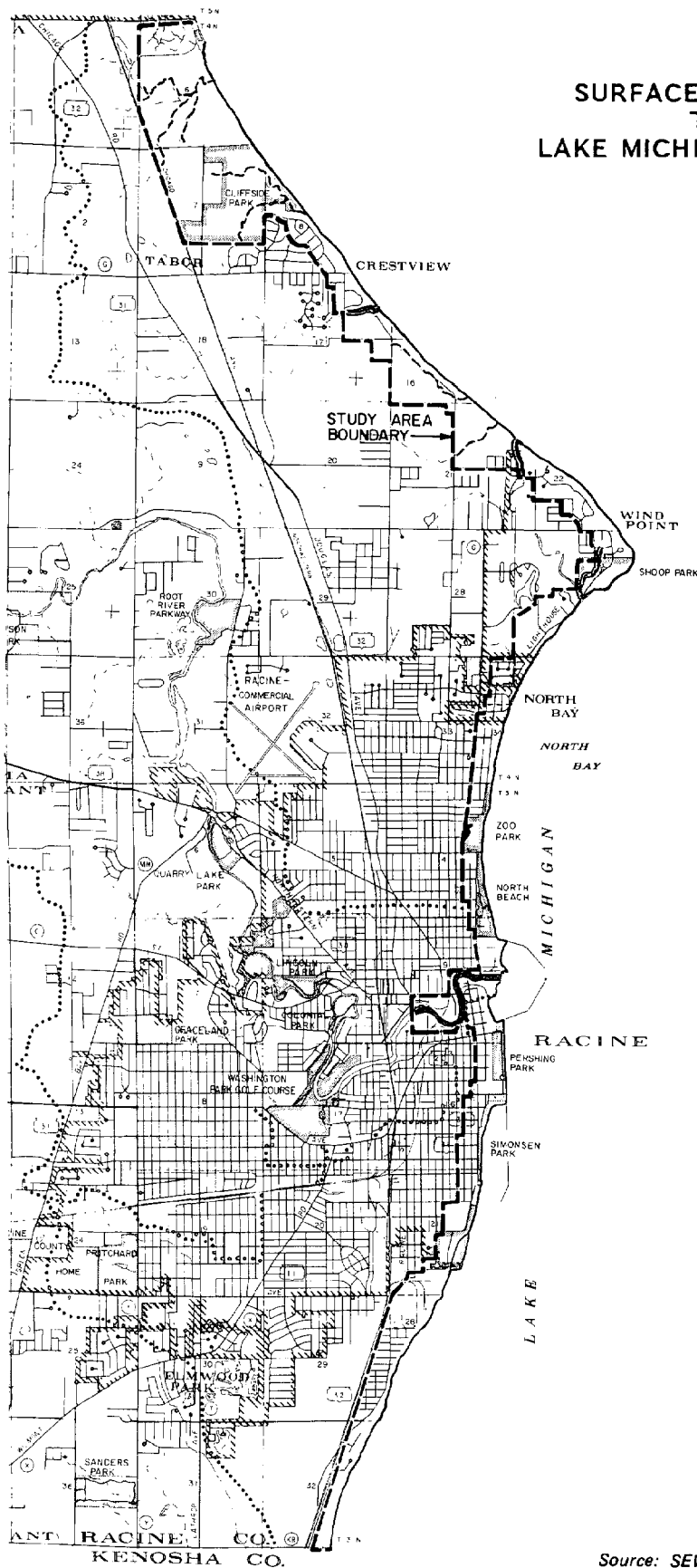
#### Surface Waters

Surface water resources, consisting primarily of Lake Michigan but also of the Root River and other minor streams directly tributary to Lake Michigan, form a particularly important element of the natural resource base of the study area. The contribution of these surface water resources to the economic development, recreational activities, and aesthetic quality of the shoreland area are immeasurable. The Lake Michigan shoreline through Racine County measures 14.4 miles in length. The shoreland area also contains a portion of the Root River estuary as well as all or portions of two unnamed perennial streams and seven unnamed intermittent streams (see Map 5).

The quality of both the inland surface waters and Lake Michigan are susceptible to deterioration as a result of the activities of man. The quality of the water of Lake Michigan is affected by discharges from industrial waste outfalls, sewage treatment plant outfalls, separate and combined sewer flow relief devices, storm sewer outfalls, and direct surface runoff from adjacent lands. While Lake Michigan continues to provide a good source of potable water with adequate treatment, pollution can restrict recreational use of the lake.

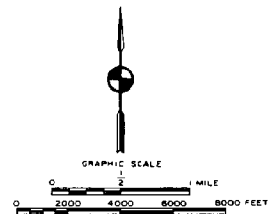
Map 5

**SURFACE WATER RESOURCES WITHIN  
THE RACINE COUNTY  
LAKE MICHIGAN SHORELAND STUDY AREA**



**LEGEND**

- PERENNIAL STREAM
- - - INTERMITTENT STREAM
- POND
- FLOODLANDS



Source: SEWRPC.

Although there has been an increase in recreational fishing on Lake Michigan, the Wisconsin Department of Natural Resources has prescribed limitations for the human consumption of chubs, lake trout, and salmon taken from Lake Michigan because of the accumulation of chemical toxins in the fish. A more detailed discussion of the water quality and sources of pollution of Lake Michigan and of the streams and rivers tributary to the lake is found in the Lake Michigan Estuary and Direct Drainage Area Subwatersheds Planning Programs Prospectus, published by the Regional Planning Commission in 1978.

### Floodlands

The floodlands of a river or stream are typically wide, gently sloping areas contiguous with, and usually lying on both sides of, the river or stream channel. Rivers and streams occupy the channels most of the time. However, during even minor flood events, stream discharges increase markedly such that the channel is not able to convey all of the flow and, as a result, stages increase and the river or stream spreads laterally over the adjacent floodlands.

For planning and regulatory purposes, floodlands are normally defined as the areas, excluding the channel, subject to inundation by the 100-year recurrence interval flood event. This is the event that may be expected to be reached or exceeded in severity on the average of once every 100 years; or, stated another way, the event which has a 1 percent chance of being reached or exceeded in any given year. Flood hazard areas along the Root River were identified by the Regional Planning Commission under the Root River watershed planning program, while flood hazard areas along other streams in the shoreland study area have been delineated in flood insurance studies conducted by the Federal Emergency Management Agency for the City of Racine, the Village of Wind Point, and the unincorporated area of Racine County. Floodlands identified along the Root River and other streams within the study area encompass a total of 13 acres, or less than 1 percent of the total shoreland area (see Map 5).

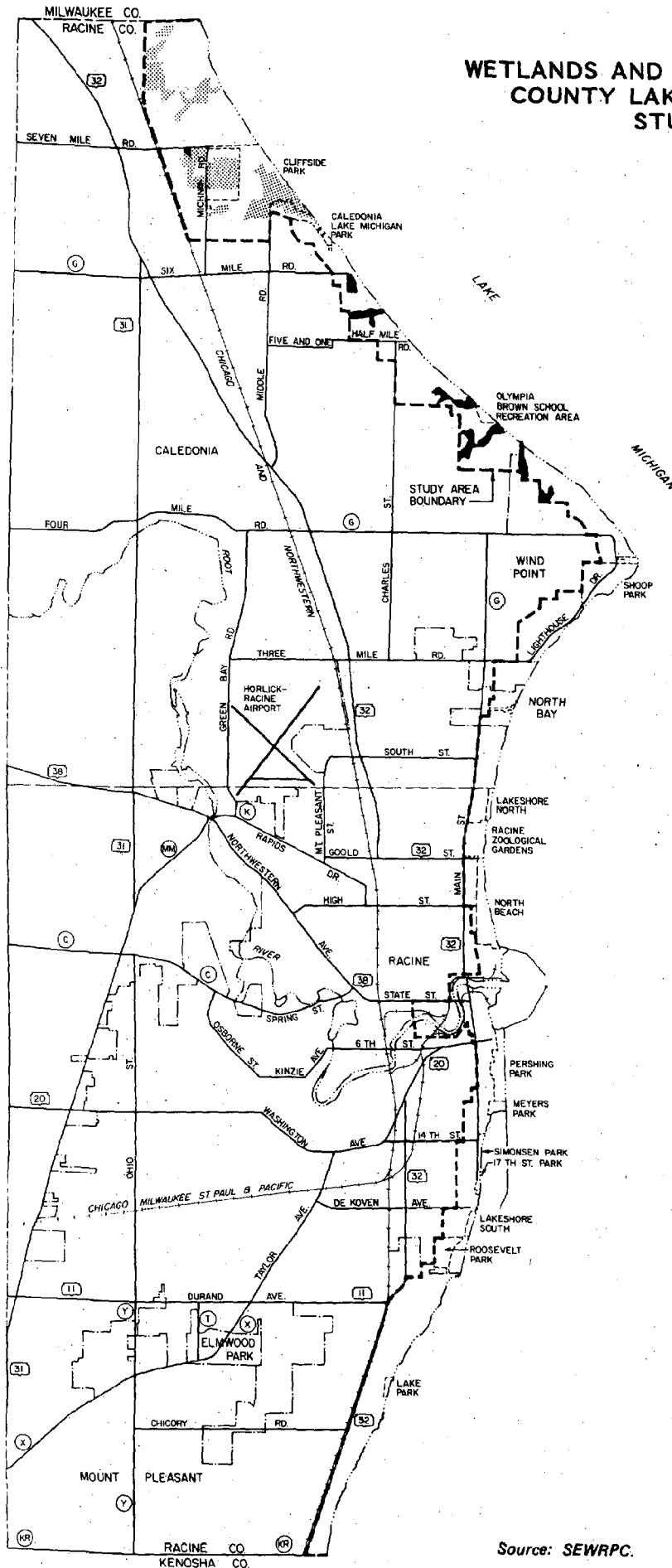
It is important to note that portions of the Racine County coastal area are also subject to inundation as a result of high lake levels. The aforementioned flood insurance studies identify a narrow band along the Lake Michigan shoreline which is subject to inundation by Lake Michigan on the average of once every 100 years. This band includes those lands lying below an elevation of 583.9 feet National Geodetic Vertical Datum (mean sea level datum), but does not include lands above this elevation subject to storm wave runup which could occur during the 100-year event.

### Woodlands

While relatively scarce, woodlands remain an important natural resource within the shoreland study area. Woodlands covered about 146 acres, or 6 percent of the total shoreland study area, in 1980. As shown on Map 6, virtually all remaining woodlands in the shoreland area are located in Cliffside Park, in adjoining Caledonia Lake Michigan Park, and in areas north and west of these parks.

Map 6

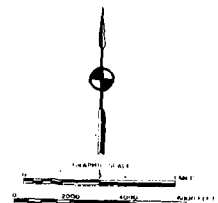
**WETLANDS AND WOODLANDS IN THE RACINE  
COUNTY LAKE MICHIGAN SHORELAND  
STUDY AREA: 1980**



**LEGEND**

- WETLANDS
- WOODLANDS

Source: SEWRPC.



Woodlands have both economic and ecological value, and under good management can serve a variety of uses. In addition to contributing to clean air and water, woodlands contribute to a diversity of plant and animal life in association with human life, and can thereby provide important educational and recreational opportunities. It is important to note that existing woodlands can be destroyed through mismanagement in a short time, thereby contributing to the siltation of surface water and the destruction of wildlife habitat areas. Woodlands should be maintained for their total value--scenic, wildlife habitat, educational, recreational, and watershed protection.

### Wetlands

Wetlands are defined as areas in which the water table is at, near, or above the land surface, and are characterized both by hydric soils and by the growth of hydrophytes such as sedges, cattails, and willows. Wetland areas, like woodland areas, are relatively scarce within the shoreland area, covering 50 acres, or about 2 percent of the total shoreland area. As shown on Map 6, the remaining wetlands are located primarily along streams in the portion of the coastal area between Wind Point and the Crestview subdivision.

Wetlands have important natural functions which make them particularly valuable resources. For example, wetlands contribute to the maintenance of good water quality by serving as traps which retain nutrients and sediments, thus preventing them from reaching streams and lakes. They also provide essential breeding, nesting, resting and feeding grounds, and predator escape cover for many forms of fish and wildlife. In recognition of these important environmental functions, efforts to protect the few wetlands remaining within the shoreland study area are warranted.

### Wildlife Habitat

Inventories of wildlife habitat within the Southeastern Wisconsin Region were carried out cooperatively by the Wisconsin Department of Natural Resources and the Regional Planning Commission in 1963 and 1970. In these inventories, wildlife habitat areas were categorized as having high, medium, or low value. High-value habitat areas contain a good diversity of wildlife, are adequate in size to meet all the habitat requirements for the species concerned, and are generally located in proximity to other habitat areas. Medium-value wildlife habitat areas generally lack one of the three above-mentioned criteria for a high-value wildlife habitat area. However, they do contain a good diversity of plant and animal life. Low-value habitat areas are remnant in nature in that they generally lack two or more of the three above-mentioned criteria for a high-value wildlife habitat. Such areas may, nevertheless, be valuable if located in proximity to other high- or medium-value wildlife habitat areas, if they provide corridors linking higher value wildlife habitat areas, or if they provide the only available range in the area.

The woodland and wetland areas described above contain virtually all the remaining wildlife habitat in the shoreland area. The woodland areas shown on Map 6 contain most of the remaining medium-value wildlife habitat in the shoreland study area. Wildlife present in these areas include, among other species, gray squirrel, rabbit, chipmunk, raccoon, opossum, woodchuck, fox,

and deer.<sup>6</sup> The remnant wetland areas along the streams just north of Wind Point contain the remaining low-value wildlife habitat within the study area. No high-value wildlife habitat was identified in the study area in the 1970 inventory.

It should be noted that, although not categorized as a wildlife habitat area in the 1970 inventory, the entire Lake Michigan shoreline has major importance associated with the migratory movements of song birds, waterfowl, shore birds, gulls, terns, and raptors (hawks and owls).<sup>7</sup>

### Fish Habitat

Historic data indicate that during the first half of the nineteenth century, commercial as well as sport fishermen in southeastern Wisconsin caught whitefish, large herring, sturgeon, and lake trout in large numbers. Since that time, the pressure of heavy fishing combined with the rapid urbanization of the southeastern Wisconsin coastal areas and the attendant deterioration of water quality, the destruction of spawning areas, and habitat alterations in Lake Michigan and its estuaries and tributaries have caused desirable fish populations to decline. The lake sturgeon population, for example, was greatly reduced by 1903. The lake sturgeon's eggs were considered a valuable source of caviar by some fishermen, and others tried to eradicate the fish for fouling nets and supposedly eating the eggs of more desirable food fish. As the numbers of each commercial fish population declined, attention shifted to another species until it, too, suffered the effects of overfishing. The total commercial catch began to rise soon after World War I and, with additional target species introduced such as carp and smelt, continued to grow until about 1950. At that time the effects of the sea lamprey, which had invaded the Great Lakes through the Welland Canal in 1921, and the alewife had produced critical habitat pressures on the native fish of Lake Michigan. The lamprey, which is parasitic on other fish species, had almost annihilated the lake trout population by 1950. In addition, by 1955 the alewife population, unchecked by predators, had increased to an estimated 90 percent of the total Lake Michigan fish population. Commercial fishing declined in the 1950's but experienced a modest resurgence in the early 1960's and has been relatively stable since. To restore a balance to the lake fishery, massive fish-stocking programs were initiated in the 1960's by the Wisconsin Department of Natural Resources to introduce such deep-water predator species as the coho and chinook salmon and to increase the populations of such native species as brook and lake trout. The numbers of these species planted into Lake Michigan along the Wisconsin Lake Michigan shoreline within the past five years are shown in Table 4, along with the numbers planted along the Racine County Lake Michigan shoreline, including the Root River, within the past five years. In order to attain maximum benefit from the stocked species and to curb exploitation by commercial fishermen, planted fish are subject to sport fishing only.

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<sup>6</sup>Owen Ayres & Associates, Inc., Ecological Study--Racine County, Wisconsin, 1979.

<sup>7</sup>Donald R. Thompson, et. al., Fish and Wildlife Habitat Study--Wisconsin Great Lakes Shoreline, 1976.

Table 4

**SALMON AND TROUT PLANTING PROGRAM ALONG THE WISCONSIN  
LAKE MICHIGAN SHORELINE AND THE RACINE COUNTY LAKE  
MICHIGAN SHORELINE, INCLUDING ROOT RIVER: 1976-1980**

Year	Number of Fish Planted, Including Fingerlings and Yearlings, by Species											
	Rainbow Trout		Brown Trout		Brook Trout		Coho Salmon		Chinook Salmon		Lake Trout	
	Wisconsin	Racine County	Wisconsin	Racine County	Wisconsin	Racine County	Wisconsin	Racine County	Wisconsin	Racine County	Wisconsin	Racine County
1976	963,624	92,325	292,112	--	11,600	--	666,773	51,000	1,267,600	7,900	1,045,000	--
1977	682,911	61,647	802,043	47,240	643,352	--	492,276	50,070	912,608	19,745	969,600	208,000
1978	612,602	79,708	1,244,101	68,137	242,625	--	499,300	50,000	2,017,149	40,000	994,400	--
1979	1,241,340	107,781	959,502	25,970	184,710	--	448,665	42,005	1,863,811	140,000	942,673	9,930
1980	1,136,688	139,506	1,024,993	52,000	184,900	--	491,876	79,600	2,429,500	--	1,013,500	--

Source: Wisconsin Department of Natural Resources and SEMRPC.



Presently, the Lake Michigan sport fishery is sustained primarily by supplemented fish-stocking operations. As many of the fish species concerned are anadromous, spawning runs up tributaries to Lake Michigan, including the Root River, occur in the spring and autumn when the temperature and dissolved oxygen content are most satisfactory for the fish. However, little reproduction occurs as water quality conditions in the tributary streams are not adequate to support the development of fish eggs and fry.

The Lake Michigan fish planting program, coupled with increased sport fishing, has resulted in substantial harvests of salmon and trout in the Racine area in recent years. The trend in the number of trout and salmon taken from selected fisheries--namely from boats launched at the Pershing Park launch ramp, from breakwaters and selected shorelands in Racine, and from the Root River--is presented in Table 5. This table indicates that there is considerable year-to-year variation in the number of each species taken. It should be noted in reviewing Table 5 that the data for the trolling fishery includes only the fish caught from boats launched at the public boat launch ramps at

**Table 5**  
**NUMBER OF SALMON AND TROUT CAUGHT FOR**  
**SELECTED FISHERIES IN RACINE: 1976-1980**

Type of Fishery	Species	Estimated Number of Fish Caught by Year				
		1976	1977	1978	1979	1980
Trolling-- Includes Fish Caught From Boats Launched at Public Ramps at Pershing Park	Brown Trout.....	47	62	1,140	395	435
	Rainbow Trout....	305	1,364	951	942	248
	Coho Salmon.....	3,448	16,403	9,888	5,182	35,120
	Chinook Salmon...	492	7,938	6,467	4,969	9,417
	Lake Trout.....	258	248	570	1,079	1,621
	Total	4,550	26,015	19,016	12,567	46,841
Breakwater-- Includes Fish Caught From City of Racine Breakwaters	Brown Trout.....	41	--	195	69	78
	Rainbow Trout....	454	3,337	350	206	786
	Coho Salmon.....	660	1,839	1,071	606	1,259
	Chinook Salmon...	83	749	331	110	708
	Lake Trout.....	--	--	--	--	--
	Total	1,238	5,925	1,947	991	2,831
Shore-- Includes Fish Caught From Shore at Meyers Park and Environs	Brown Trout.....	108	246	116	71	--
	Rainbow Trout....	1,937	1,841	2,842	117	817
	Coho Salmon.....	1,238	1,596	1,682	24	148
	Chinook Salmon...	269	368	1,044	--	74
	Lake Trout.....	--	--	116	--	74
	Total	3,552	4,051	5,800	212	1,113
Stream-- Includes Fish Caught Along the Root River Between Its Mouth and the Horlick Dam	Brown Trout.....	--	--	40	--	426
	Rainbow Trout....	172	503	632	330	426
	Coho Salmon.....	34	42	59	42	--
	Chinook Salmon...	3,228	3,562	1,245	524	7,247
	Lake Trout.....	--	--	--	--	--
	Total	3,434	4,107	1,976	896	8,099

Source: Wisconsin Department of Natural Resources.

Pershing Park; fish taken by boats kept or launched at the Racine Yacht Club or at privately operated marina facilities located along the Root River are not included.

## PARK AND OPEN SPACE SITES

Lake Michigan and the natural resource amenities along the Lake Michigan shoreline provide a unique setting for park and open space sites and the resource-oriented outdoor recreation facilities within such sites. Such sites are necessary for the provision of opportunities for water-dependent activities, including swimming, fishing, and boating. Nonwater-dependent activities, including camping, picnicking, and pleasure driving and other trail activities are significantly enhanced by the presence of Lake Michigan and adjacent shoreline resources.

### Existing Park and Open Space Sites

Existing parks in the Racine County shoreland area provide a variety of resource-oriented outdoor recreation opportunities, including opportunities for boating, camping, fishing, picnicking, and swimming. Other sites in the shoreland area provide open space lands and outdoor recreation facilities adjacent to the Lake, without providing direct access to the Lake Michigan surface waters. Pertinent information on the existing publicly owned park and open space sites within the shoreland study area is presented in Table 6 and on Map 7.

As indicated in Table 6, park and public open space sites constitute a total of 480 acres, or 20 percent, of the shoreland study area. The combined Lake Michigan shoreline frontage of these sites totals 4.83 miles, or 34 percent, of the total length of the Lake Michigan shoreline in Racine County. City of Racine parks comprise 3.33 miles, or about 69 percent, of the total frontage devoted to public outdoor recreation uses. Cliffside Park, owned by Racine County, accounts for an additional 0.72 mile, or 15 percent, of the total frontage in public outdoor recreation use. The remaining 0.78 mile, or 16 percent, consists of village and town parklands and a school outdoor recreation site.

In addition to the public outdoor recreation sites identified in Table 6, two sites--a 25-acre site owned by the State of Wisconsin and a 50-acre site owned by the federal government--represent additional publicly owned open space lands within the shoreland study area. These sites are located in the northern portion of Racine County and are used primarily as a target range by various branches of the military under the management of the National Guard. While these sites are not generally open to the public, the public ownership does have the effect of preserving these sites in open space uses.

As further indicated in Table 6, resource-oriented outdoor recreation opportunities provided at parks in the study area include opportunities for such activities as boating, camping, fishing, picnicking, swimming, and trail activities. Public boat access facilities are provided at only three sites in the shoreland study area. One site is the Pershing Park boat launch site, consisting of six boat launch ramps inside the Racine harbor and associated

Table 6

EXISTING PARKS AND PUBLIC OPEN SPACE SITES AND SELECTED  
RESOURCE-ORIENTED OUTDOOR RECREATION FACILITIES IN THE  
RACINE COUNTY LAKE MICHIGAN SHORELAND STUDY AREA: 1982

Owner	Site Name	Area (acres)	Frontage on Lake Michigan (feet)	Selected Resource Oriented Facilities					Trails and Walkways
				Boat Launch	Camping	Fishing	Picnicking	Swimming	
City of Racine	Colbert Park	0.3	--						
	Dodge Park	1.3	--						
	East Park	2.7	--						
	John Thompson Park	0.5	--						X
	Lakeshore North	3.7	1,280						X
	Lakeshore South	5.3	1,280			X			
	Lakeview Park	4.5	--			X			
	Meyers Park	7.2	920						
	Monument Square	0.6	--						
	North Beach	44.7	3,760				X		
	Pershing Park	35.4	3,480			X	X		
	Pederson Overlook	0.1	--						
	Roosevelt Park	17.3	--						
	Seventeenth Street Park Site	2.7	1,000	X		X		X	X
	Shoop Park	63.0	2,960	X		X			X
	Simonsen Park	3.7	1,360			X		X	X
	Zoological Gardens	32.5	1,560			X			
	Unnamed Village Park	4.1	900				X		
Village of North Bay	Village Hall	4.8	300						
Village of Wind Point	Caledonia Lake	21.7	1,200						
Town of Caledonia	Michigan Park	3.1	800						
Town of Mt. Pleasant	Lake Park	213.6	3,760		X		X		X
Racine County	Cliffside Park								
Racine Unified School District	Olympia Brown School								
Total	23 sites	479.6	25,500	3	1	6	3	3	7

Source: SEMRPC.

1. *Chlorophyll a* (Chl *a*)

2. *Chlorophyll b* (Chl *b*)

3. *Carotenoids* (Car)

4. *Phaeophytin a* (Phe *a*)

5. *Phaeophytin b* (Phe *b*)

6. *Phaeoerythrin* (Phe *er*)

7. *Phaeoxanthophyll* (Phe *x*)

8. *Phaeo-zeaxanthin* (Phe *z*)

9. *Phaeo-zeaxanthin* (Phe *z*)

10. *Phaeo-zeaxanthin* (Phe *z*)

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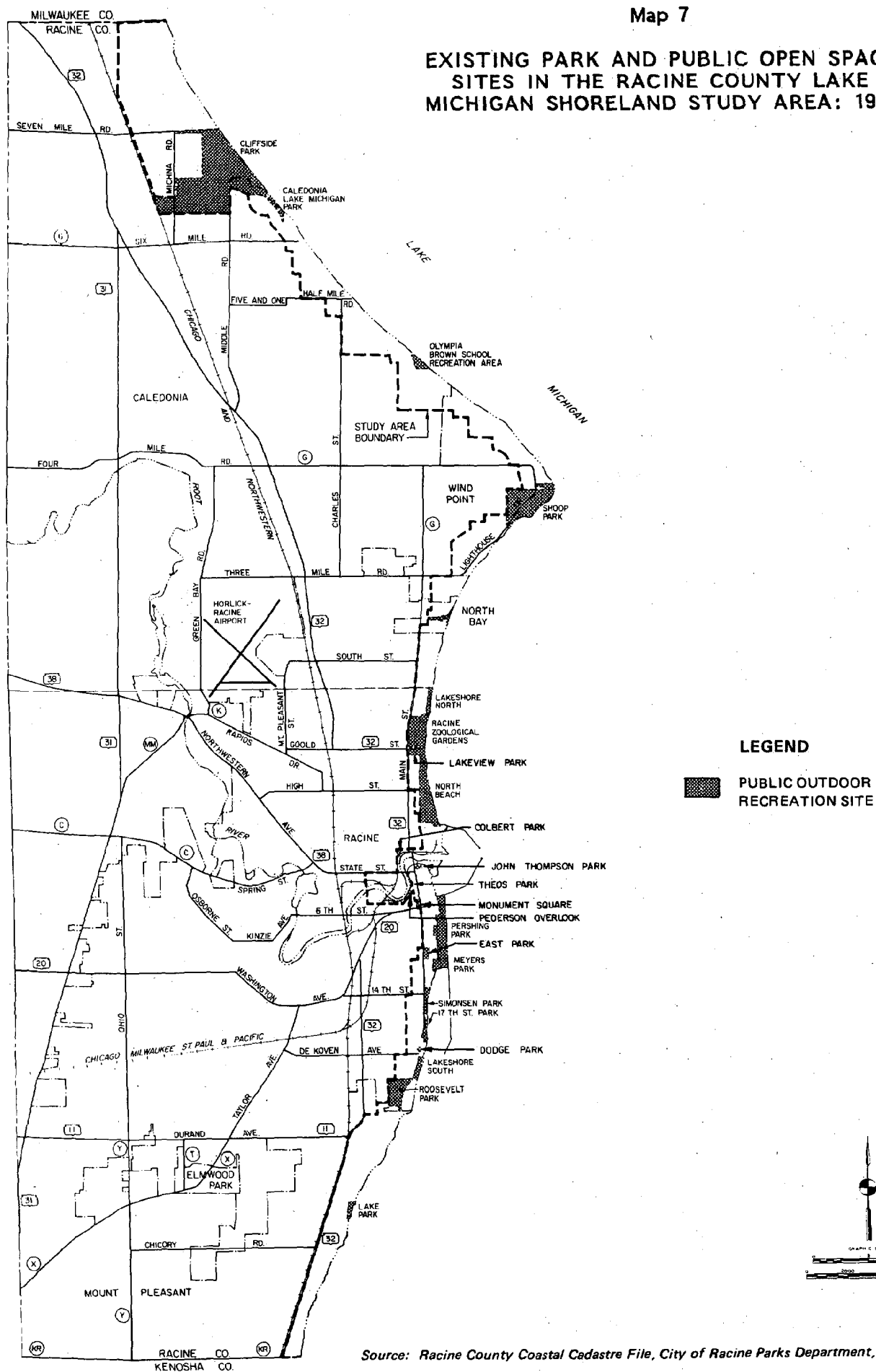
97. *Phaeo-zeaxanthin* (Phe *z*)

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# EXISTING PARK AND PUBLIC OPEN SPACE SITES IN THE RACINE COUNTY LAKE MICHIGAN SHORELAND STUDY AREA: 1982



*Source: Racine County Coastal Cadastre File, City of Racine Parks Department, and SEWRPC.*

parking. The other two sites are hand-carry boat launch areas at Shoop Park and the 17th Street park site. Camping facilities are available in the northern portion of the study area at Cliffside Park, which provides a total of 92 individual campsites and three group campsites, with each group site accommodating up to 35 persons.

As further indicated in Table 6, shoreline fishing opportunities are generally available in the city parks south of the Racine harbor and at Shoop Park on Wind Point. In addition, the harbor breakwater is utilized for shoreline fishing activities. It is important to note that shoreline fishing opportunities in the northern and southern portions of the County are generally not available because of limited beach areas from which to fish, and because the high bluffs in these areas of the County generally prevent access to the shoreline.

Picnicking facilities are provided in the City of Racine at North Beach, Pershing Park, and the Zoological Gardens, and in the Town of Caledonia at Cliffside Park, while informal opportunities for picnicking and other passive recreational activities are generally available at all of the parks having frontage on the Lake Michigan shoreline.

As further indicated in Table 6, swimming opportunities are provided only at the sandy beaches north of the Racine harbor breakwater at North Beach, the Zoological Gardens, and a small beach at 17th Street Park. Lifeguards are provided only at North Beach.

There are no designated continuous hiking trails along the Lake Michigan shoreline in Racine County. However, as indicated in Table 6, nondesignated walkways and foot paths are located in many of the city lakefront parks. In addition, a nature trail and hiking path are provided at Cliffside Park.

In addition to the recreational opportunities provided at parks and public open space sites in the shoreland study area, the private sector also provides facilities for certain outdoor recreation activities. All of the existing boat moorings and slips and all facilities for dry storage of boats are provided by private interests. An inventory of boating facilities conducted under the Racine harbor management study indicated that in 1979 there were 588 boats in private marine storage facilities in the Racine harbor and along the Root River east of Marquette Street, including 416 boats in slips and moorings and 172 boats in dry dock storage. Facilities for an additional 163 boats, including 118 slips and 45 dry dock storage spaces, have been identified since the 1979 inventory.

In addition to the marinas and yacht clubs within the shoreland study area, there are three additional nonpublicly owned sites which are utilized for outdoor recreational activities in the study area--the Prairie School, which is located in the Village of Wind Point; the Case Eagle Gun Club in the Town of Mt. Pleasant; and a trap shooting range located within the Wisconsin Electric Company property in the Town of Caledonia.

#### Potential Park and Open Space Sites

As previously discussed, certain outdoor recreation activities are dependent upon direct access to surface waters for their very existence, as in the case

of fishing and swimming, while other activities are significantly enhanced by the presence of surface water and other natural features, as in the case with camping and picnicking. In the Racine County shoreland study area, large portions of the study area are devoted to urban land use and, except for the extreme northern portion of the study area, only small, isolated parcels of land remain undeveloped and therefore suited for development of outdoor recreation and Lake Michigan access purposes. In order to identify and evaluate the remaining undeveloped parcels of land in the Racine County shoreland study area, an inventory of potential park and open space sites was conducted. Utilizing the Commission's 1980 aerial photographs and the maps prepared under the Racine County Lake Michigan cadastre study,<sup>8</sup> a total of 24 undeveloped parcels were identified, and the suitability of each site for development of outdoor recreation facilities was evaluated. The general location of these potential park sites is shown on Map 8, while a more detailed location of the potential sites is presented in Appendix B. The site characteristics and suitability for selected outdoor recreation facilities are presented in Table 7.

As shown on Map 8, 11 potential park sites, or 46 percent, of the total remaining such sites, are located in the Town of Caledonia, while five sites, or 21 percent, are located in the Town of Mt. Pleasant. The remaining eight sites, or 33 percent, are located in the City of Racine and the Villages of North Bay and Wind Point. As further indicated in Table 7, these potential park sites are all generally small, with only six sites being greater than five acres in size. Only two sites--both of which are located adjacent to Cliffside Park in the northern portion of the study area--are greater than 25 acres in size.

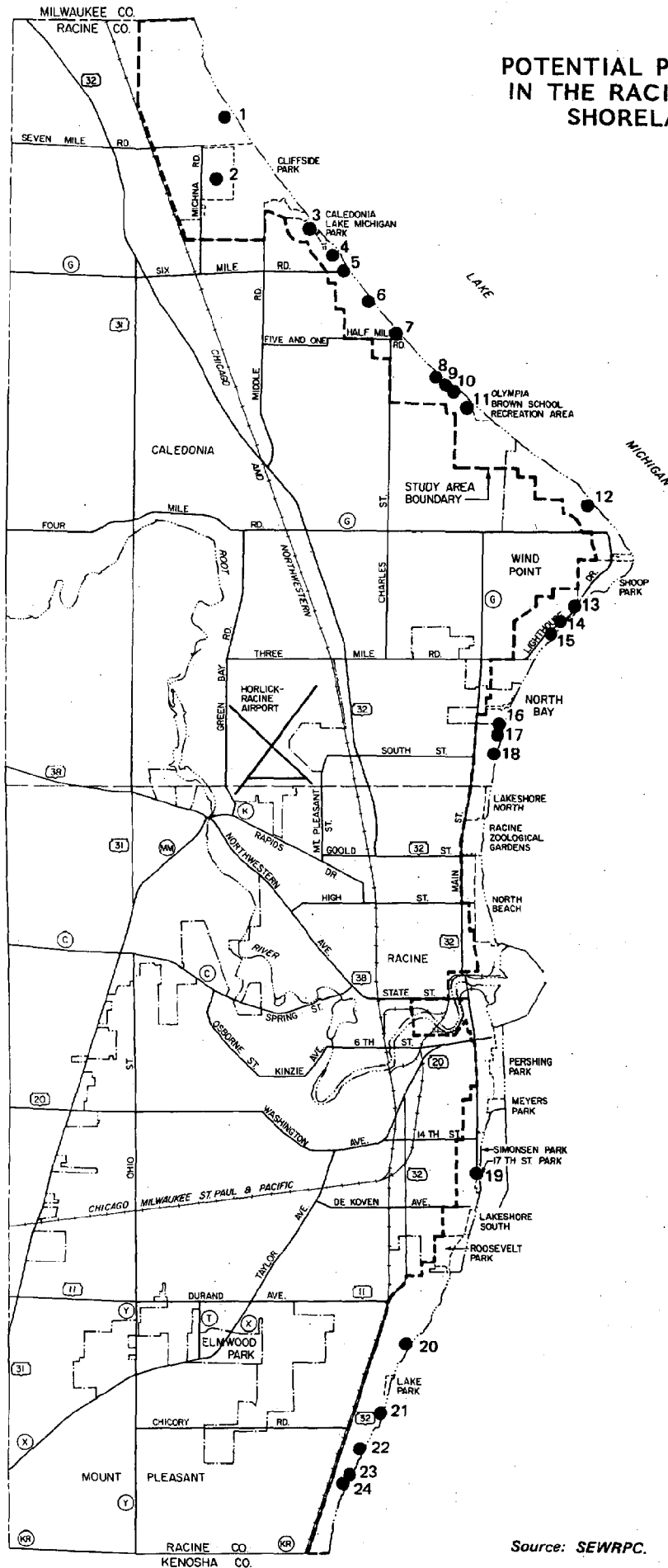
For each of the 24 potential park and open space sites, the Commission staff identified the site characteristics, including the natural resource features present at the site, the land use adjacent to the site, and the suitability of each site for a variety of recreation activities, including water-dependent activities in which shore access is required, water-enhanced activities for which shore access is not required, and activities for which the presence of water and related natural resource features are not required. In the evaluation of the suitability of each site for selected outdoor recreation facilities, a site was considered suitable for the subject facility if the following recreational uses would be provided for: 1) swimming--an accessible sandy beach, 2) beach activities--an accessible beach with no riprap, rubble, or large boulders along the beach, 3) fishing--an accessible shoreline, 4) boating, launch ramp and parking facilities--a natural protected area which may require bluff and shore stabilization but would not require significant breakwater construction to provide safe launch ramp facilities, 5) hand-carry boating access point--an area which, with appropriate bluff and shore stabilization, could provide for the safe launching of small boats from the shore, 6) scenic drive--a connection for an existing road with a view of Lake Michigan could be provided or a site large enough so that a scenic roadway with a view of the lake could be constructed within the site, 7) scenic overlook--an area with clear visual access to the lake and with no unsightly shoreline fill or adjacent land use to detract from the view of the lake, 8) trail--an

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<sup>8</sup>Racine County Planning and Zoning Department, Racine County Shoreland Cadastre Program, 1981.

Map 8

POTENTIAL PARK AND OPEN SPACE SITES  
IN THE RACINE COUNTY LAKE MICHIGAN  
SHORELAND STUDY AREA: 1982



Source: SEWRPC.

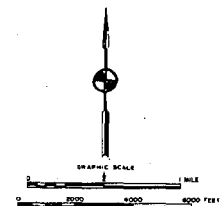


Table 7

POTENTIAL PARK AND OPEN SPACE SITES IN THE RACINE  
COUNTY LAKE MICHIGAN SHORELAND STUDY AREA: 1982

Site Number	Size (acres)	Site Characteristics					Suitability for Recreational Activities												
		Physical Features			Adjacent Use		Water-Dependent Shore Access Required					Water Enhanced Shore Access Not Required							
		Woods or Shrubs	Open, Level, or Agriculture	Other	Residential	Other Urban	Open	Swimming	Beach Activities	Fishing	Launch Ramps and Parking Facilities Provided	Boating Opportunity for Launching "Hand-Carry" Boats Provided	Scenic Drive	Scenic Overlook	Trails	Picnic	Camping	Playground	Playfield
1	228	X	X				X					X	X	X	X	X	X		X
2	183 <sup>a</sup>	X	X				X							X	X	X	X		X
3	7																		
4	3																		
5	1	X	X				X							X	X	X	X		
6	1	X	X				X							X	X	X	X		
7	1	X	X				X							X	X	X	X		
8	1	X	X				X							X	X	X	X		
9	2	X	X				X							X	X	X	X		
10	2	X	X				X							X	X	X	X		
11	1	X	X				X							X	X	X	X		
12	1	X	X				X							X	X	X	X		
13	2	X	X				X							X	X	X	X		
14	21	X	X				X							X	X	X	X		
15	2	X	X				X							X	X	X	X		
16	1	X	X				X							X	X	X	X		
17	6	X	X				X							X	X	X	X		
18	1	X	X				X							X	X	X	X		
19	1 <sup>a</sup>						X							X	X	X	X		
20 <sup>b</sup>	--						X							X	X	X	X		
21	--						X							X <sup>c</sup>	X <sup>c</sup>	X <sup>c</sup>			
22	1	X	X				X							X	X	X	X		
23	1	X	X				X							X	X	X	X		
24	7	X	X				X							X	X	X	X		

<sup>a</sup>This site is less than 0.5 acre in size.

<sup>b</sup>Site 20 consists of the following road ends: Bryn Mawr, Rosalind, Graceland, Kenilworth, Lavndale, and Larson.

<sup>c</sup>The road end at Larson Street is suitable for the development of a small picnic area.

Source: SEWRPC.



area which could serve as a connection for existing walkways or trails along the Lake Michigan shoreline or an area large enough to contain hiking, biking, or nature study trails completely within the site, 9) picnicking--an area with visual access to the lake and large shade trees or an area in which a natural setting could be created through landscaping, 10) camping--an area which is large enough and buffered from urban development so that a campground with privacy and a natural setting could be provided, 11) playfield--an open, level area at least two acres in size able to safely accommodate softball and other playfield activities, and 12) playground--an open, level area able to support development of playground facilities and to provide a safe play area for small children. A summary of the suitability of each site for these outdoor recreation activities, as well as the physical features and adjacent land uses at each site, is presented in Table 7.

As indicated in Table 7, 13 sites, or 54 percent, are wooded and therefore may be considered to encompass a natural setting on at least a portion of the site; and 19 sites, or 79 percent, encompass open, level areas which could be utilized for active outdoor recreational activities. As further indicated in Table 7, 21 sites, or 88 percent, are located in existing residential areas. Finally, as indicated in Table 7, 21 sites, or 88 percent, are suited for scenic overlooks and passive recreational activities; 19 sites, or 79 percent, are suited for picnic activities; and 19 sites, or 79 percent, are suited for the development of small playground areas. Only four sites are considered as suitable for swimming and only two sites are considered suitable for camping, both of which are located adjacent to the existing campground at Cliffside Park.

It is important to note that no single site is well suited for all of the outdoor recreational activities considered. However, three sites--Site No. 14, a 21-acre site located in the Village of Wind Point; Site No. 17, a six-acre site located in the City of Racine; and Site No. 24, a seven-acre site located in the Town of Mt. Pleasant--are suited to all of the selected outdoor recreation activities except camping, and should additional park sites along Lake Michigan be required, these sites will warrant special consideration for acquisition and development for park and open space purposes. In addition, it is important to note that the two large sites located in the northern portion of the shoreland study area in the Town of Caledonia--Site No. 1, a 228-acre site; and Site No. 2, a 183-acre site--are located adjacent to Cliffside Park and could be considered for acquisition and development should additional acreage be required for the development of facilities at Cliffside Park.

In the identification of sites which have the potential to provide outdoor recreation opportunities and access to Lake Michigan, it is important to point out that the Root River provides a direct link from the northern portions of the County through the City of Racine to the Racine harbor and the Lake Michigan shoreline. This link can serve as the basis for the location of a corridor for outdoor recreation access to the shoreland area. At the suggestion of the Technical Advisory Committee for the Racine County shoreland access study, the Commission staff identified the existing park and open space sites located along the Root River and evaluated their potential for the development of boating access to the Racine harbor and Lake Michigan. Since the Racine County Parks Department recently prepared a plan for the Root River from the Racine-Milwaukee County line to the Horlick Dam which recommends the acquisition of adequate park and open space lands along the Root River, the Commission staff

Table 8

**EXISTING PARK AND OPEN SPACE SITES LOCATED ALONG  
THE ROOT RIVER BETWEEN THE STUDY AREA  
BOUNDARY AND THE HORLICK DAM**

Number on Map 9	Site Name	Area (acres)	Suitable for Canoe Access
330	Brose Park	4	X
315	Cedar Bend Park	2	X
331	Clayton Park	5	X
244	Colonial Park	70	X
230	Horlick Island Park	5	X
253	Lee Park	6	X
239	Lewis Park	16	X
231	Lincoln Park	29	X
260	Parker Playground	2	X
178	Quarry Lake Park	43	
177	Racine County Club	196	
286	Recreation Service Center	2	
241	Riverside Park	15	X
227	Washington Park Golf Course	79	X
14 Total Sites		474	--

Source: SEWRPC.

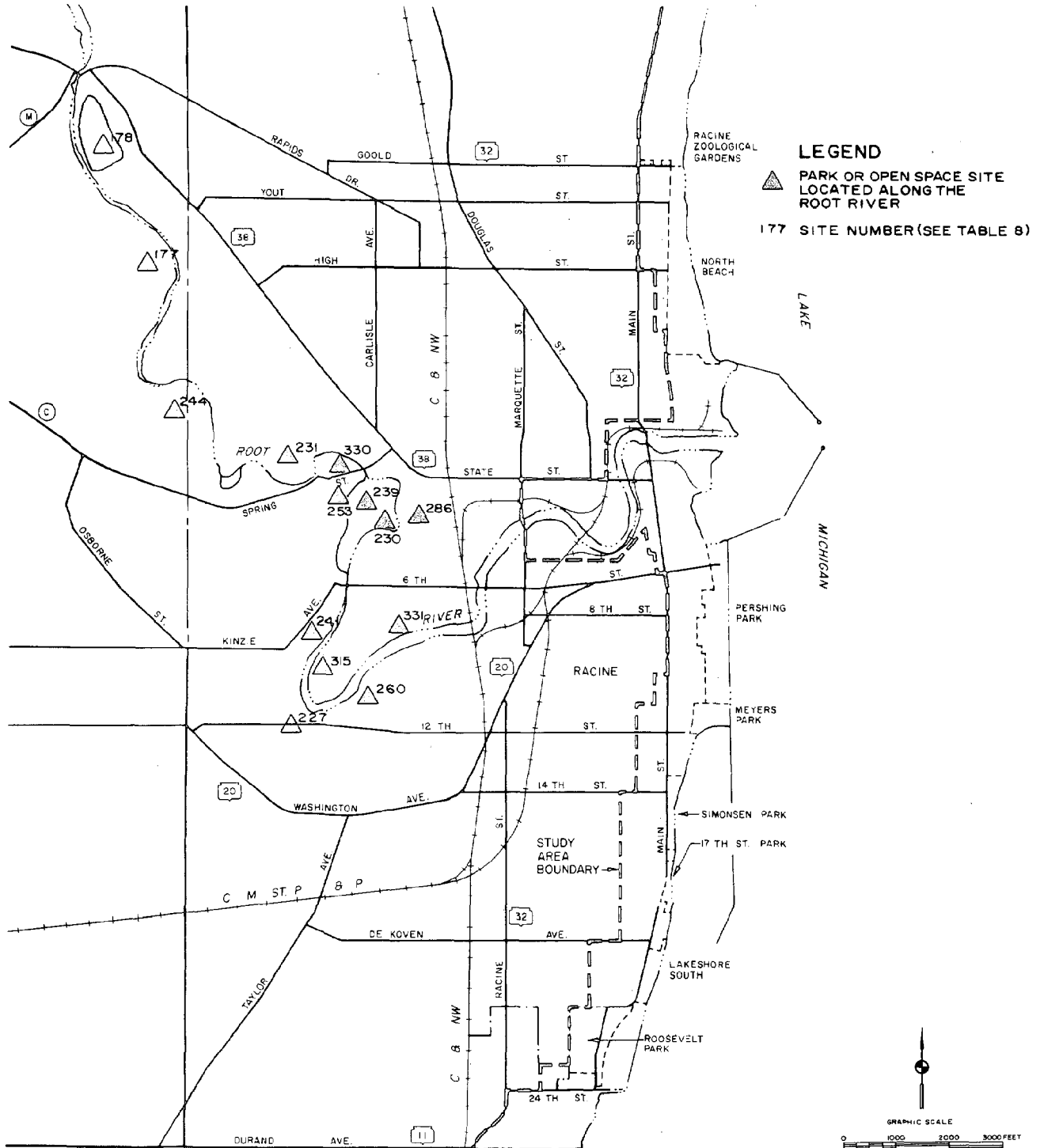
limited its examination of the Root River corridor to the area between the shoreland study area boundary at the Marquette Street bridge and the Horlick Dam. As indicated in Table 8 and shown on Map 9, 14 existing park and open space sites, totalling 474 acres, are located along this reach of the Root River, 11 of these sites offer canoe and other small, shallow-draft boat access to the River. Although it is possible to canoe from Quarry Lake Park--which is located immediately downstream from the Horlick Dam--to the Racine harbor, canoes and other relatively small shallow-draft boats required to reach the harbor by means of the Root River would not be suitable for use on Lake Michigan. Thus, sites along the Root River upstream from the Marquette Street bridge cannot be expected to provide suitable access for Lake Michigan boating activities. It should be pointed out that, while there are no existing continuous designated trail facilities along the Root River, the existing park sites could serve as the basis for a trail and canoe corridor which could link these outdoor recreation sites to the Racine harbor and the Lake Michigan shoreline.

### Scenic Viewpoints

A scenic viewpoint has been defined by the Regional Planning Commission as a vantage point from which a diversity of natural features can be observed. Three basic criteria were applied in identifying such viewpoints: 1) the variety of features viewed should exist harmoniously in a natural landscape, 2) there should be one dominant or particularly interesting feature, such as a river or lake, which serves as the focal point of the scenic area, and

# Map 9

## EXISTING PARK AND PUBLIC OPEN SPACE SITES ALONG THE ROOT RIVER BETWEEN MARQUETTE STREET AND THE HORLICK DAM



Source: SEWRPC.

3) the viewpoint should permit an observation area from which the natural features can be viewed. With the aid of topographic maps, areas with a relief of 30 feet or more and a slope of 13 percent or more were identified. Such areas which have a ridge at least 200 feet in length and a view of significant natural resources within approximately one-half mile of the ridge were identified as scenic viewpoints.

In the shoreland study area, the high bluffs provide a continuous scenic viewpoint of Lake Michigan and the shoreline, and the following scenic viewpoints along coastal reaches of the study area were identified: an almost continuous reach from Chicory Road extending to Pershing Park, a continuous reach from Five-and-One-Half Mile Road to the northern county line, and a shore reach along North Beach in the City of Racine.

It should be noted that these scenic viewpoints are not necessarily accessible to the general public. However, the existing surface transportation network does provide the general public with a view of the lake from certain locations within the study area and, at the same time, provides facilities for pleasure driving, one of the more popular outdoor recreational activities in the Region. Those public roads located close to the Lake Michigan shoreline which provided a continuous route from the Racine-Kenosha County line to the northern boundary of Cliffside Park were identified. As shown on Map 10, these roadways are located within and immediately adjacent to the study area and total approximately 22.6 miles in length. Those stretches of road from which a clear, unobstructed view of Lake Michigan is possible were also identified. Those segments of public roadway with a clear view of the lake totalled 3.7 miles in length, or only 16 percent of the total public roadway located closest to the lake, and, as shown on Map 10, are not continuous. In addition, these road segments are distributed throughout the study area, thus making it difficult to view the lake from the existing public roadway network.

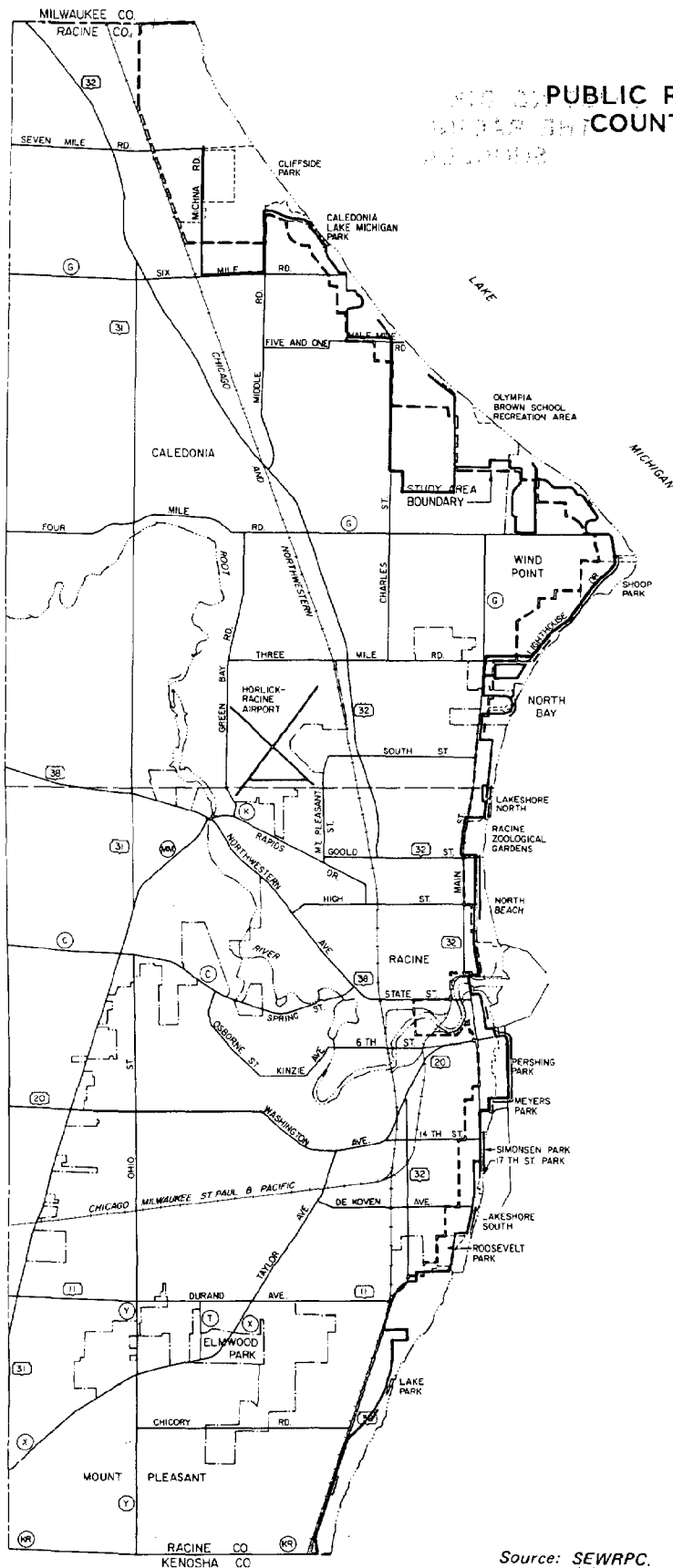
Bike trails may also provide opportunities for enjoying scenic views of the Lake Michigan shoreline. An inventory of existing bike trails and bike routes in the study area revealed that there is only one small segment of the Racine County bike trail located in the study area west of Cliffside Park, and no scenic view of Lake Michigan is possible from this off-the-road bike trail segment. In addition to this small segment of county bike trail, the City of Racine has identified a system of bike routes over the public streets of the City.<sup>9</sup> As shown on Map 11, the City bike route network and the County bike trail within the study area combined total approximately 8.4 miles in length. As further shown on Map 11, of this total, approximately 1.6 miles, or about 19 percent of the bike routes and trails offer a clear scenic view of Lake Michigan. Of this 1.6 miles having a scenic view of Lake Michigan, approximately 0.7 mile is located along Lighthouse Drive in the vicinity of Shoop Park in the Village of Wind Point. It is important to note that, as in the case of the existing public roadways located closest to the Lake Michigan shoreline within and adjacent to the study area, only limited opportunity for scenic views of Lake Michigan and the shoreline are provided. It is also important to note that the existing Chicago, Milwaukee, St. Paul and Pacific Railroad right-of-way located south of the Root River in downtown Racine is

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<sup>9</sup>Racine City Plan Commission and Board of Parks and Recreation Commissioners, Leisure Services for Racine, 1977.

Map 10

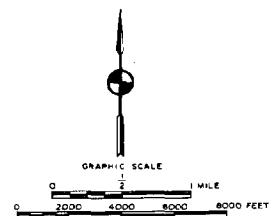
# PUBLIC ROADS ADJACENT TO THE RACINE COUNTY LAKE MICHIGAN SHORELINE



## LEGEND

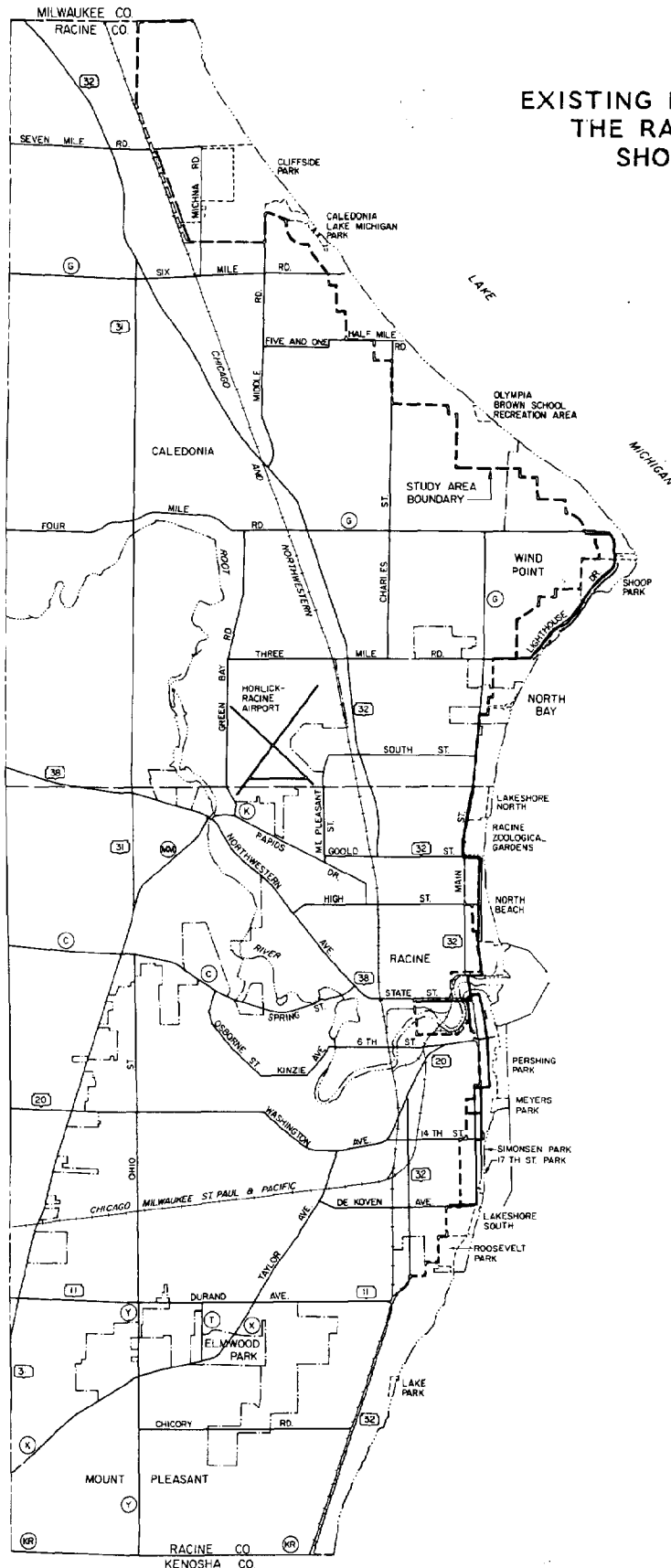
- EXISTING CONTINUOUS PUBLIC ROAD NEAR THE LAKE MICHIGAN SHORELINE
- ROAD SEGMENTS HAVING A CLEAR, UNOBSTRUCTED VIEW OF LAKE MICHIGAN

Source: SEWRPC.



Map 11

EXISTING BIKE ROUTES AND TRAILS WITHIN  
THE RACINE COUNTY LAKE MICHIGAN  
SHORELAND STUDY AREA: 1982



LEGEND

- CITY OF RACINE BIKE ROUTE WITHIN THE SHORELAND STUDY AREA
- - - RACINE COUNTY BIKE TRAIL WITHIN THE SHORELAND STUDY AREA
- BIKE ROUTE SEGMENT HAVING A CLEAR VIEW OF LAKE MICHIGAN

Source: City of Racine Parks and Recreation Department and SEWRPC.

being considered for abandonment, and, should this abandonment take place, this right-of-way would provide an opportunity to develop trail facilities adjacent to the study area along the Root River.

### Historic Sites

Historic sites comprise an important element of the unique cultural heritage of Racine County and the Southeastern Wisconsin Region. An inventory of historic sites maintained by the State Historical Society of Wisconsin identified a total of 123 historic sites within the shoreland area in 1979 (see Table 9 and Map 12). Of this total, 109 sites, or 89 percent, consist of historic structures; 5 sites, or 4 percent, consist of archeological features; and 9 sites, or 7 percent, consist of other cultural features. Over one-half of the identified historic sites within the shoreland study area are concentrated in the City of Racine between 8th Street and Dekoven Avenue. Because of the concentration of historic sites, this portion of the study area and adjacent portions of the City of Racine were designated by the City as a historic district--the Southside Historic District--and this district was recognized on the National Register of Historic Places in 1977.

### Natural Areas

Natural areas, as defined by the Wisconsin Scientific Areas Preservation Council, are tracts of land or water so slightly modified by man's activity, or sufficiently recovered from the effects of such activities, that they contain intact native plant and animal communities believed to be representative of the pre-European settlement landscape. The Wisconsin Department of Natural Resources, Scientific Areas Section, conducted an inventory of natural areas for Racine County in 1974 and updated that inventory for the Lake Michigan coastal area in 1980. These inventories resulted in the identification of a single natural area in the shoreland area meeting the state criteria--namely the Crestview Ravines and Banks. This site is classified as a Natural Area of Local Significance.<sup>10</sup> By definition, such areas have been modified by man's activities but nevertheless retain a modest amount of natural cover. These areas are suitable for local educational use and may be expected to increase in value if protected in an undisturbed condition.

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<sup>10</sup>Under the Scientific Areas Preservation Council classification system, natural areas are classified into one of the following categories: State Scientific Area, Natural Area of Statewide or Greater Significance, Natural Area of Countywide or Regional Significance, and Natural Area of Local Significance. The classification is based upon a consideration of the diversity of plant and animal species and community types present, the structure and integrity of the native plant or animal community, the extent of disturbance from man's activities, the commonness of the plant and animal communities present, any unique features within the area, the size of the area, and the area's educational value.

Table 9

## HISTORIC SITES IN THE RACINE COUNTY LAKE MICHIGAN SHORELAND AREA

Site Type	Civil Division	Number on Map 12	Site Name	Number on Map 12	Site Name
Structural	City of Racine	3367	Robert Goodman house	3511	Masonic temple
		3402	L. A. Nelson house	3513	Brick italianate house
		3403	Plymouth Congregational church	3514	Queen Anne house
		3405	Gilbert Billings house	3515	Frame italianate house
		3406	St. Luke's hospital	3516	United Methodist Episcopal Church
		3407	Margaret Shurr house	3517	Goodland house
		3408	Classical revival frame house	3518	S. C. Johnson house
		3409	Italianate house	3519	Brick italianate house
		3410	August Frank house	3542	Racine Water Works
		3411	Thomas Jones house	3548	Secor Trunk and Valise Company
		3412	James Langlois house	3547	Renquist Association, Inc.
		3413	R. M. Boyd house	3546	Racine Lodge #252, BPOE
		3414	Lawrence DuFour house	3549	Chandler Flats
		3415	Brick early picturesque house	3550	William W. Dingee house
		3416	Cooley house	3551	Joseph Schroeder residence
		3417	Frame early picturesque house	3552	Prairie School house
		3418	Julian Sims house	3553	Women's Club of Racine
		3419	Isaac Taylor house	3554	Prairie School bungalow
		3420	Henry Stevens house	3555	Warehouse, Wisconsin Natural Gas Company
		3422	Henry R. Mitchell house	3556	Shingle style house
		3425	Queen Anne house	3557	Burroughs house
		3426	Thomas Harvey residence	3558	One-story neo-classical revival building
		3429	Henry Durand house	3559	El Zarape restaurant
		3430	Joseph Miller house	3560	Animal Cage building
		3431	Bull Manor apartments	3571	First Church of Christ, Scientist
		3432	Eli R. Cooley house	3583	Kaiser's
		3433	Henry Miller house	3584	Y. M. C. A. building
		3434	David Lawton residence	3585	Rickeman building
		3435	Thomas Jones house	3595	Harvey building
		3436	Charles H. Lee residence	3598	Shoop Drive Family Medicine Company
		3437	Brick and stone house	3609	Dania Club
		3438	Thomas D. Pushee residence	3616	Byron Blake house
		3439	Chauncey Hall house	3617	Charles Baker house
		3440	Judd Freeman residence	3618	Wisconsin Natural Gas Company
		3441	William Hunt house	3619	Police Station
		3442	Early picturesque frame house	3634	Taylor Hall, Racine College
		3443	Thomas D. Hardy house	3635	Racine College chapel
		3444	C. R. Carpenter house	3636	Kemper Hall, De Koven Foundation
		3450	Frame Queen Anne house	3637	Park Hall, De Koven Foundation
		3451	Frame classical revival house	3662	McClurg building
		3453	Lighthouse and Coast Guard station	3663	Italianate store fronts
		3468	Church of Good Shepard	3664	Hall block
		3471	Robinson Building	3665	Weisner's building
		3472	Something Special flower store	3666	Baker block
		3473	Frame italianate house	3667	U. S. Post Office
		3475	Frame georgian revival house	3672	Victorian house
		3476	Mediterranean bungalow	3673	Wrightian house
		3477	Late picturesque frame duplex	3674	Frank J. Mrkvicka saloon
		3479	Three-story Queen Anne house	3675	Wolff clothing store
		3482	Warren J. Davis house	3676	Manufacturer's National Bank
		3483	Professor Alexander Falk house	3678	Andrew Carnegie Public Library
		3494	Bishop house	3680	Racine Chamber of Commerce
	Village of Wind Point	3354	Wind Point Lighthouse	3357	Johnson house
		3355	The Prairie School	3358	Spindrift
		3356	J. B. Thomas farmhouse		
	Village of North Bay	3368	Albert house	3369	Sidney Milch
	Town of Caledonia	3313	Double geodesic dome house		
Cultural	City of Racine	3428	Mary Todd-Abraham Lincoln statue	3626	Paul Harris plaque
		3467	Memorial Hall	3629	Visit of First White Men marker
		3480	Brick street pavement	3630	Knapp monument
		3567	Soldiers' monument	3631	F. D. R. monument
		3624	Zoo park		
Archaeological	City of Racine	3378	Burial platform	3380	Village site
		3379	Campsite		
	Town of Caledonia	3312	(Village/Worksite) Tabor Village	3314	Tabor cemetery

Source: State Historical Society of Wisconsin and SEWRPC.



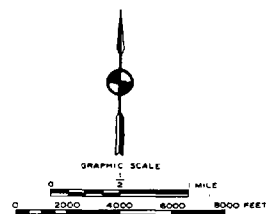
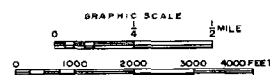
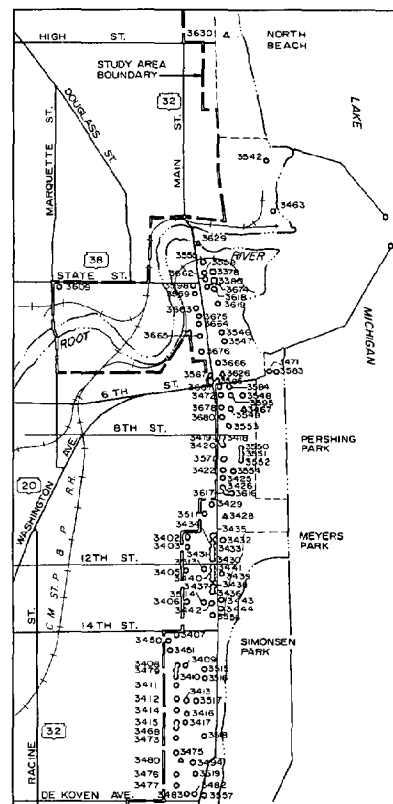
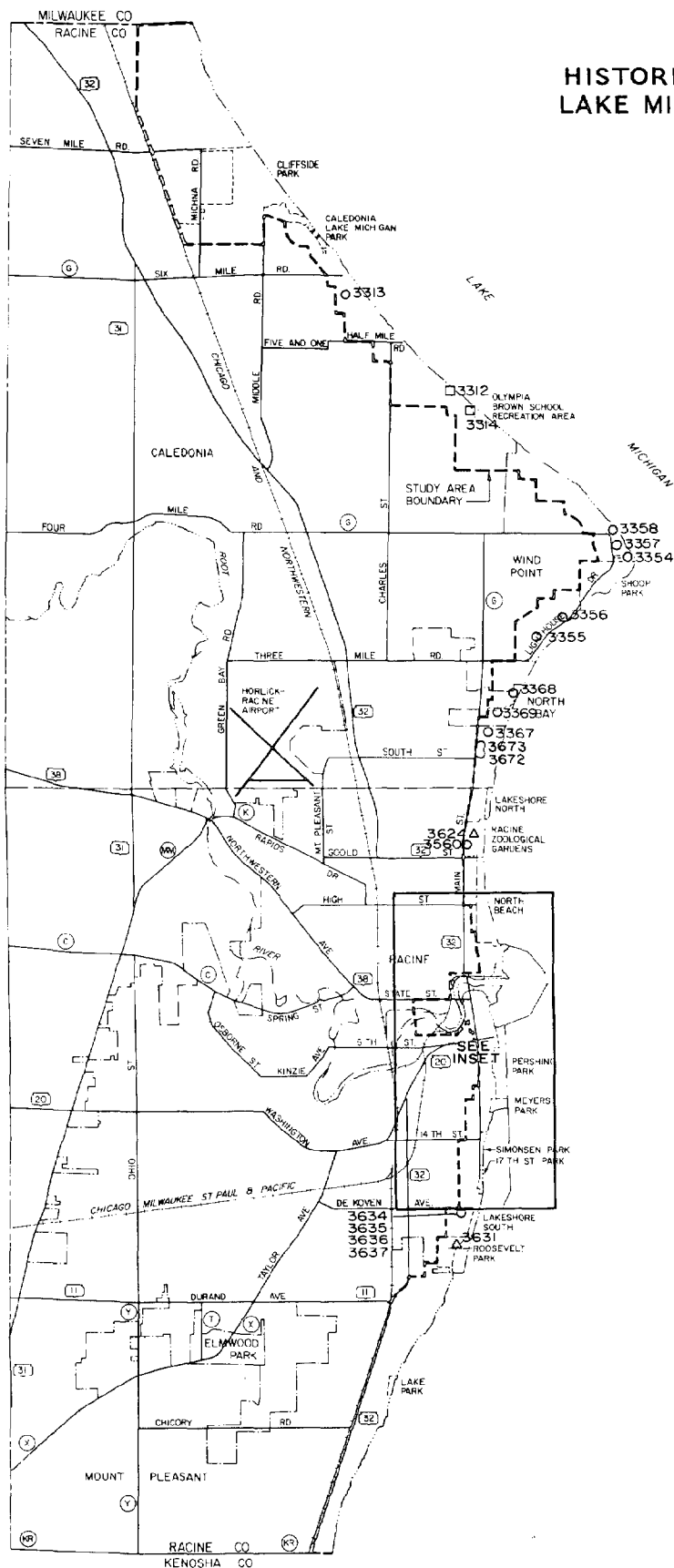
## Map 12

# HISTORIC SITES IN THE RACINE COUNTY LAKE MICHIGAN SHORELAND STUDY AREA

### LEGEND

- |      |   |
|------|---|
| 0    | STRUCTURAL SITE                             |
| □    | ARCHEOLOGICAL SITE                          |
| Δ    | CULTURAL SITE                               |
| 3312 | SITE IDENTIFICATION NUMBER<br>(SEE TABLE 9) |

INSET



Source: State Historical Society of Wisconsin and SEWRPC.

## ENVIRONMENTAL CORRIDORS

### The Environmental Corridor Concept

One of the most important tasks completed under the regional planning effort was the identification and delineation of those areas in southeastern Wisconsin in which significant concentrations of recreational, aesthetic, ecological, and cultural resources occur and which, therefore, should be preserved and protected. Such areas normally include one or more of the following seven elements of the natural resource base which are essential to the maintenance of both the ecological balance and natural beauty of the Region: 1) lakes, rivers, and streams and their associated shorelands and floodlands; 2) wetlands; 3) woodlands; 4) prairies; 5) wildlife habitat areas; 6) wet, poorly drained, and organic soils; and 7) rugged terrain and high-relief topography. While the foregoing elements comprise the integral parts of the natural resource base in southeastern Wisconsin, there are five additional elements which, although not part of the natural resource base per se, are closely related to or centered on that base and are a determining factor in identifying and delineating areas with recreational, aesthetic, ecological, and cultural value. These five additional elements include: 1) existing park and open space sites, 2) potential park and open space sites, 3) historic sites, 4) scenic areas and vistas, and 5) natural and scientific areas.

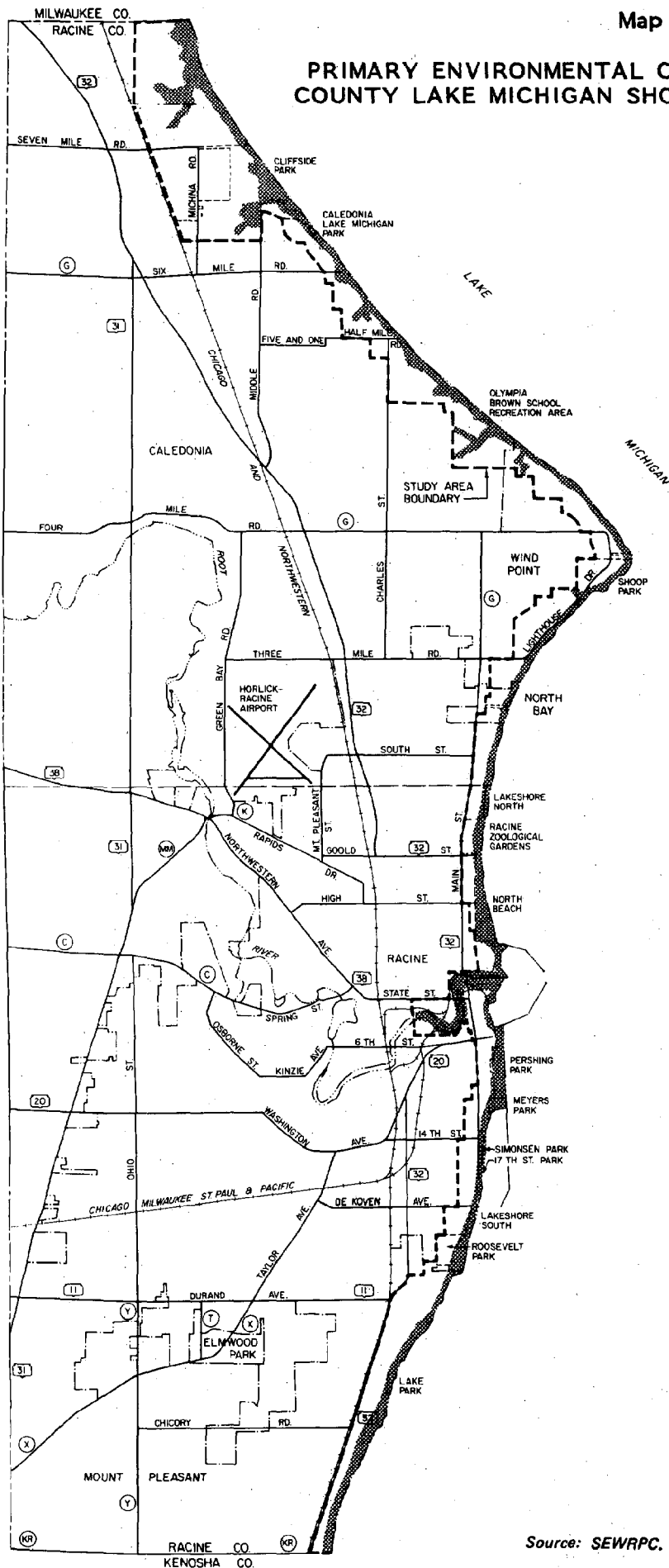
The delineation of these 12 natural resource and natural resource-related elements on a map results in an essentially linear pattern of relatively narrow, elongated areas which have been termed "environmental corridors" by the Commission. Primary environmental corridors include a wide variety of the above-mentioned important resource and resource-related elements and are, by definition, at least 400 acres in size, two miles in length, and 200 feet in width.

The primary environmental corridors of southeastern Wisconsin generally lie along major stream valleys and major lakes, and in the Kettle Moraine area. Primary environmental corridors contain all of the remaining high-value woodlands, wetlands, and wildlife habitat areas; all of the major bodies of surface water and associated floodlands and shorelands; and many of the best remaining potential park sites. They are, in effect, a composite of the best individual elements of the natural resource base of southeastern Wisconsin, having truly immeasurable environmental and recreational value.

Primary Environmental Corridors within the Study Area: In general, in the Southeastern Wisconsin Region, the primary environmental corridor encompasses at a minimum the lands 75 feet from the shoreline of major rivers and inland lakes. Along the Lake Michigan shoreline, because of the generally wider beach and bluff areas and other natural resource features associated with the Lake Michigan shore, the environmental corridor encompasses at a minimum the width of the beach and an area 200 feet inland from the inland edge of the beach. Where a bluff at least 20 feet in height is located within the 200 feet distance from the inland edge of the beach, the environmental corridor encompasses the beach, the lands between the beach and the bluff, the face of the bluff, an area 200 feet inland from the inland edge or top of the bluff. As shown on Map 13, a single continuous primary environmental corridor has been identified along the Lake Michigan shoreline within the shoreland study area. This corridor includes many of the existing and potential park sites and historic sites identified in the shoreland study area. In addition, the primary

Map 13

# PRIMARY ENVIRONMENTAL CORRIDORS IN THE RACINE COUNTY LAKE MICHIGAN SHORELAND STUDY AREA: 1980

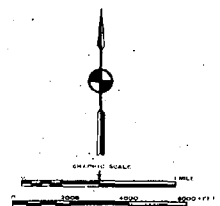


## LEGEND



PRIMARY ENVIRONMENTAL CORRIDOR: 1980

Source: SEWRPC.



environmental corridor includes a narrow shoreline area on both sides of the Root River within the study area, as well as most of the wetlands and woodlands along the streams in the study area north of Wind Point. The primary environmental corridor shown on Map 13 encompasses 776 acres, or 30 percent, of the total shoreland study area.

While much of the Lake Michigan shoreline in Racine County is held in public outdoor recreational use, a considerable portion of the shoreline area has been developed in residential, commercial, industrial, and other intensive urban uses. A primary environmental corridor has, nevertheless, been delineated along the entire Lake Michigan shoreline in recognition of the invaluable natural resource which Lake Michigan represents. The delineation of this environmental corridor recognizes that the Lake Michigan shoreland, including the intensively developed portions, is a unique area which conditions, and is conditioned by, Lake Michigan and which, because of its proximity to the lake, has important recreational, aesthetic, and ecological values. It should be noted that even intensively developed coastal reaches typically include a narrow bank of undeveloped shoreland. Furthermore, the amount of open space land within the identified primary environmental corridor may potentially be increased through the conversion of developed but declining areas to open space use, thereby contributing to a more natural coastal environment.

Regional plans call for the preservation in essentially natural, open space uses all of remaining undeveloped lands within the identified primary environmental corridors. Regional plans also suggest that, as developed areas within primary environmental corridors along Lake Michigan become obsolete or otherwise ready for redevelopment, consideration be given to uses that would enhance the quality of the corridor, would contribute to the continuity of the corridor, and would be compatible with the underlying recreational, aesthetic, and ecological values of the Lake Michigan shoreland.

## SUMMARY AND CONCLUSIONS

This chapter has presented a description of the Racine County Lake Michigan shoreland area, focusing in particular on the area of Racine County lying within approximately 1,000 feet of the ordinary high water mark of Lake Michigan. The chapter includes information regarding the land use and natural resource bases as well as information regarding existing and potential park and open space sites in the shoreland area--information considered to be essential to the development of a shoreland public access plan. The following summarizes the most important findings set forth in this chapter.

### Existing Land Use

Much of the Lake Michigan shoreland of Racine County is committed to urban land use, and little undeveloped open land remains within the shoreland area. Specifically, a total of 1,429 acres, or 56 percent of the 2,552-acre shoreland study area, was devoted to urban uses in 1980, including residential, commercial, industrial, transportation, governmental, and institutional uses. Recreational uses comprised an additional 414 acres, or 16 percent of the total area. Remaining undeveloped lands, including wetlands, woodlands, and

agricultural and other open lands, encompasses 672 acres, or 26 percent, of the total area. Surface waters account for the small balance--37 acres, or about 2 percent--of the shoreland study area.

### Natural Resource Base

The principal elements of the natural resource base of the shoreland area include its surface waters, beaches, bluffs, wetlands, woodlands, and wildlife habitat areas. Surface waters, consisting primarily of Lake Michigan but also of the Root River and other minor streams directly tributary to Lake Michigan, form a particularly important element of the natural resource base of the shoreland study area. The contribution of these surface waters to the economic development, recreational opportunities, and aesthetic quality of the shoreland area is substantial. The Lake Michigan shoreline of Racine County measures 14.4 miles. The shoreland area also includes a portion of the Root River estuary as well as all or portions of two unnamed perennial streams and seven unnamed intermittent streams.

Beaches in Racine County generally consist of sand and gravel and range in width from a few feet in various reaches of the shoreline up to 500 feet in North Beach, located north of the northern breakwater of Racine harbor; conversely, beaches are nonexistent along many reaches of the Racine shoreline, including the area within the harbor breakwater and the shoreline areas adjacent to the sewage treatment plant, Pershing Park, and the Wisconsin Electric Power Company.

Much of the Lake Michigan coastline in Racine County consists of bluffs. Bluff heights vary considerably from reach to reach, with the highest bluffs of more than 80 feet in height found along the shoreline north of Cliffside Park. Bluff erosion is a significant problem along portions of the Lake Michigan shoreline in Racine County and is a major consideration in the evaluation of the recreational development potential of remaining open space lands along the Lake Michigan shoreline.

While relatively scarce, woodlands and wetlands remain important natural resources within the shoreland area. Woodlands covered about 146 acres, or 6 percent, of the shoreland study area in 1980; and wetlands covered about 50 acres, or 2 percent, of the study area. The remaining woodlands and wetlands within the shoreland study area are found north of Four-Mile Road in the Town of Caledonia.

In recognition of the underlying recreational, aesthetic, and ecological values, a primary environmental corridor has been delineated along the entire Lake Michigan shoreline of Racine County. This corridor includes many of the parks, historic sites, scenic viewpoints, wetlands, and woodlands which have been identified in the shoreland study area. The primary environmental corridor encompasses 776 acres, or 30 percent, of the shoreland study area.

### Existing Park and Open Space Sites

Existing parks in the Racine County shoreland area provide a variety of resource-oriented outdoor opportunities, including opportunities for boating,

camping, fishing, picnicking, swimming, and passive recreational activities. The combined Lake Michigan shoreline frontage of existing parks totals 4.83 miles, or 34 percent of the total length of the Lake Michigan shoreline in Racine County. City of Racine parks comprise 3.33 miles, or about 69 percent of the total devoted to public outdoor recreation uses. Cliffside Park, owned by Racine County, accounts for an additional 0.72 mile, or 15 percent of the total frontage in public outdoor recreation use. The remaining 0.78 mile, or 16 percent, consists of village and town parklands and a school recreation site.

Public Lake Michigan boat access facilities in Racine County consist of the public boat launch ramp at Pershing Park and two hand-carry launch sites, one located at Shoop Park and the other located at the 17th Street park site. All of the existing boat moorings and slips and all facilities for the dry dock storage of boats are provided by private interests.

### Potential Park and Open Space Sites

As part of an inventory of potential park and open space sites conducted under this study, a total of 24 parcels were identified, and the suitability of each site for development of outdoor recreation facilities was evaluated. The potential sites are generally small, with only six sites being greater than five acres in size, and only two sites being greater than 25 acres in size. An evaluation of the recreational development potential of the sites indicated that 21 sites are suitable for a scenic overlook and passive recreational areas; 19 sites are suited for picnic activities; and 19 sites encompass open, level areas which could be used for active outdoor recreational pursuits. Conversely, the potential for providing additional water-dependent activities is limited, with only four sites found suitable for swimming, five sites for beach activities, and seven sites for fishing.

In order to identify the potential for a scenic coastal pleasure driving or biking route, public roadways located closest to Lake Michigan which provided a continuous route from the Racine-Kenosha County line to the northern boundary of Cliffside Park were identified. These roadways are located in and adjacent to the shoreline study area and total approximately 22.6 miles in length. Only a small portion--3.7 miles, or 11 percent--of this network provide a clear, unobstructed view of Lake Michigan, indicating that the development of a continuous pleasure driving or biking route along Lake Michigan shoreline would be difficult.

### Conclusions

While existing park and public open space sites provide significant opportunities for participation by the public in outdoor recreation activities within the Lake Michigan coastal area, opportunities for the provision of additional public recreational sites and facilities in the coastal area are limited by a number of factors. Much of the Racine County Lake Michigan shoreland area has already been committed to urban use and, except for the extreme northern portion of the shoreland area, only small, isolated parcels of land remain in an undeveloped, open state. The small size and physical development limitations, including unstable bluff conditions, limits the recreational development potential of many of the remaining sites. Few sites have the potential to

accommodate water-dependent activities such as swimming (four sites), beach activities (five sites), and fishing (seven sites). In addition, the fact that most of the remaining undeveloped sites are surrounded by residential development indicates that all proposals for additional recreational sites and facilities will have to be closely coordinated with neighborhood and community development objectives.

The very scarcity of remaining undeveloped shoreland areas and the continued pressure to develop remaining open lands for alternative uses underscores the need to plan now for additional Lake Michigan recreational sites and facilities. The remaining undeveloped lands, limited as they are, may take on increased importance because they are the only sites available--outside of sites created through expensive urban clearance activities--for accommodating the recreational access needs of future generations.

## Chapter III

### OBJECTIVES, PRINCIPLES, AND STANDARDS

#### INTRODUCTION

Planning is a rational process for formulating objectives and, through the preparation and implementation of plans, meeting those objectives. The formulation of objectives, therefore, is an essential task which must be undertaken before plans can be prepared. The Regional Planning Commission, as part of its regional park and open space planning program completed in 1977, formulated a comprehensive set of park and related open space preservation, acquisition, and development objectives. Because that regional study viewed all park and open space facilities as an integral part of an areawide system, the objectives addressed community and neighborhood, as well as regional, outdoor recreation facilities--including both water-dependent and nonwater-dependent facilities. Accordingly, the regional objectives provided a point of departure for the formulation and evaluation of the objective for public access to Lake Michigan within Racine County. The regional objectives were carefully reviewed by the Racine County Lake Michigan Public Access Study Technical Advisory Committee and were modified and expanded to fully reflect local as well as regional needs and values relating to public access to the Lake Michigan shoreland. This chapter sets forth the regional park and open space objectives as modified by this Advisory Committee, together with supporting principles and standards. The latter are particularly important, providing a basis for evaluation of the adequacy of existing sites and facilities, and a basis for the formulation and evaluation of a plan to eliminate existing deficiencies and fully meet the agreed-upon objectives.

#### BASIC CONCEPTS AND DEFINITIONS

The term "objective" is subject to a range of interpretations and applications and is closely linked to other terms used in planning which also are subject to a range of interpretations and applications. The following definitions of the term objective and of related terms will be used for the purposes of this report:

1. Objective: a goal or end toward the attainment of which plans and policies are directed.
2. Principle: a fundamental, primary, or generally accepted tenet used to assess the validity of an objective and to guide the preparation of supporting standards and plans.
3. Standard: a criterion used as a basis of comparison to determine the adequacy of alternative and recommended plan proposals to attain agreed-upon objectives.
4. Plan: a design which seeks to achieve agreed-upon objectives.
5. Policy: a rule or course of action used to ensure plan implementation.
6. Program: a coordinated series of policies and actions to carry out a plan.



Although this chapter deals with only the first three of these terms, an understanding of the interrelationship of the foregoing definitions and of the basic concepts which they represent is essential to a full understanding of the objectives, principles, and standards presented herein.

## OBJECTIVES, PRINCIPLES, AND STANDARDS

The following seven park and open space preservation, acquisition, and development objectives were formulated under the regional park and open space planning program and were, after careful review, adopted by the Racine County Lake Michigan Public Access Study Technical Advisory Committee for use in the formulation and evaluation of the Racine County Lake Michigan shoreland public access plan:

1. The provision of an integrated system of public general-use outdoor recreation sites and related open space areas which will allow the resident population of the Region, and particularly of Racine County, adequate opportunity to participate in a wide range of outdoor recreation activities.
2. The provision of sufficient outdoor recreation facilities to allow the resident population of the Region, and particularly of Racine County, adequate opportunity to participate in intensive nonresource-oriented outdoor recreation activities.
3. The provision of sufficient outdoor recreation facilities to allow the resident population of the Region, and particularly of Racine County, adequate opportunity to participate in intensive resource-oriented outdoor recreation activities.
4. The provision of sufficient outdoor recreation facilities to allow the resident population of the Region, and particularly of Racine County, adequate opportunity to participate in extensive land-based outdoor recreation activities.
5. The provision of opportunities for participation by the resident population of the Region, and particularly of Racine County, in extensive water-based outdoor recreation activities on the major inland lakes and rivers and on Lake Michigan consistent with safe and enjoyable lake use and maintenance of good water quality.
6. Preservation of sufficient high-quality open space lands for the protection of the underlying and sustaining natural resource base and enhancement of the social and economic well being and environmental quality of the Region, of Racine County, and of the Lake Michigan shoreland area of Racine County.
7. The efficient and economical satisfaction of outdoor recreation and related open space needs meeting all other objectives at the lowest possible cost.

Complementing each of the foregoing park and open space preservation, acquisition, and development objectives is a planning principle and a set of planning standards. These are set forth in Table 10 and serve to facilitate the quantitative application of the objectives in plan design and evaluation.

Table 10

## OBJECTIVES, PRINCIPLES, AND STANDARDS

## I. OUTDOOR RECREATION AND OPEN SPACE PLANNING OBJECTIVES, PRINCIPLES, AND STANDARDS FORMULATED UNDER THE REGIONAL PARK AND OPEN SPACE PLANNING PROGRAM

## OBJECTIVE NO. 1

The provision of an integrated system of public general use outdoor recreation sites and related open space areas which will allow the resident population of the Region adequate opportunity to participate in a wide range of outdoor recreation activities.

## PRINCIPLE

Attainment and maintenance of good physical and mental health is an inherent right of all residents of the Region. The provision of public general use outdoor recreation sites and related open space areas contributes to the attainment and maintenance of physical and mental health by providing opportunities to participate in a wide range of both intensive and extensive outdoor recreation activities. Moreover, an integrated park and related open space system properly related to the natural resource base, such as the existing surface water network, can generate the dual benefits of satisfying recreational demands in an appropriate setting while protecting and preserving valuable natural resource amenities. Finally, an integrated system of public general use outdoor recreation sites and related open space areas can contribute to the orderly growth of the Region by lending form and structure to urban development patterns.

## A. PUBLIC GENERAL USE OUTDOOR RECREATION SITES

## PRINCIPLE

Public general use outdoor recreation sites promote the maintenance of proper physical and mental health both by providing opportunities to participate in such athletic recreational activities as baseball, swimming, tennis, and ice-skating—activities that facilitate the maintenance of proper physical health because of the exercise involved—as well as opportunities to participate in such less athletic activities as pleasure walking, picnicking, or just rest and reflection. These activities tend to reduce everyday tensions and anxieties and thereby help maintain proper physical and mental well being. Well designed and properly located public general use outdoor recreation sites also provide a sense of community, bringing people together for social and cultural as well as recreational activities, and thus contribute to the desirability and stability of residential neighborhoods and therefore the communities in which such facilities are provided.

## STANDARDS

1. The public sector should provide general use outdoor recreation sites sufficient in size and number to meet the recreation demands of the resident population. Such sites should contain the natural resource or man-made amenities appropriate to the recreational activities to be accommodated therein and be spatially distributed in a manner which provides ready access by the resident population. To achieve this standard, the following public general use outdoor recreation site requirements should be met as indicated below:

Site Type	Size (gross acres)	Publicly Owned General Use Sites							
		Parks				Schools <sup>a</sup>			
		Minimum Per Capita Public Requirements (acres per 1,000 persons) <sup>d</sup>	Typical Facilities	Maximum Service Radius (miles) <sup>b</sup>		Minimum Per Capita Public Requirements (acres per 1,000 persons) <sup>f</sup>	Typical Facilities	Maximum Service Radius (miles) <sup>c</sup>	
				Urban <sup>e</sup>	Rural			Urban <sup>e</sup>	Rural
I <sup>g</sup> Regional	250 or more	5.3	Camp sites, swimming beach, picnic areas, golf course, ski hill, ski touring trail, boat launch, nature study area, playfield, softball diamond, passive activity area <sup>h</sup>	10.0	10.0	..	..	..	..
II <sup>i</sup> Multicommunity	100-249	2.6	Camp sites, swimming pool or beach, picnic areas, golf course, ski hill, ski touring trail, boat launch, nature study area, playfield, softball and/or baseball diamond, passive activity area <sup>h</sup>	4.0 <sup>j</sup>	10.0 <sup>j</sup>	..	..	..	..
III <sup>k</sup> Community	25-99	2.2	Swimming pool or beach, picnic areas, boat launch, nature study area, playfield, softball and/or baseball diamond, tennis court, passive activity area <sup>h</sup>	2.0 <sup>j</sup>	..	0.9	Playfield, baseball diamond, softball diamond, tennis court	0.5-1.0 <sup>m</sup>	..
IV <sup>n</sup>	Less than 25	1.7	Wading pool, picnic areas, playfield, softball and/or baseball diamond, tennis court, playground, basketball goal, ice-skating rink, passive activity area <sup>h</sup>	0.5-1.0 <sup>o</sup>	..	1.6	Playfield, playground, baseball diamond, softball diamond, tennis court, basket- ball goal	0.5-1.0 <sup>m</sup>	..

Table 10 (continued)

2. Public general use outdoor recreation sites should, as much as possible, be located within the designated primary environmental corridors of the Region.

**B. RECREATION RELATED OPEN SPACE**

**PRINCIPLE**

Effective satisfaction of recreation demands within the Region cannot be accomplished solely by providing public general use outdoor recreation sites. Certain recreational pursuits such as hiking, biking, pleasure driving, and ski touring are best provided for through a system of recreation corridors located on or adjacent to linear resource-oriented open space lands. A well designed system of recreation corridors offered as an integral part of linear open space lands also can serve to physically connect existing and proposed public parks, thus forming a truly integrated park and recreation related open space system. Such open space lands, in addition, satisfy the human need for natural surroundings, serve to protect the natural resource base, and ensure that many scenic areas and areas of natural, cultural, or historic interest assume their proper place as form determinants for both existing and future land use patterns.

**STANDARDS**

The public sector should provide sufficient open space lands to accommodate a system of resource-oriented recreation corridors to meet the resident demand for extensive trail-oriented recreation activities. To fulfill these requirements the following recreation-related open space standards should be met:

1. A minimum of 0.16 linear mile of recreation related open space consisting of linear recreation corridors<sup>P</sup> should be provided for each 1,000 persons in the Region.
2. Recreation corridors should have a minimum length of 15 miles and a minimum width of 200 feet.
3. The maximum travel distance to recreation corridors should be five miles in urban areas and 10 miles in rural areas.
4. Resource-oriented recreation corridors should maximize use of:
  - a. Primary environmental corridors as locations for extensive trail-oriented recreation activities.
  - b. Outdoor recreation facilities provided at existing public park sites.
  - c. Existing recreation trail-type facilities within the Region.

**OBJECTIVE NO. 2**

The provision of sufficient outdoor recreation facilities to allow the resident population of the Region adequate opportunity to participate in intensive nonresource-oriented outdoor recreation activities.

**PRINCIPLE**

Participation in intensive nonresource-oriented outdoor recreation activities including basketball, baseball, ice-skating, playfield and playground activities, softball, pool swimming, and tennis provides an individual with both the opportunity for physical exercise and an opportunity to test and expand his physical capability. Such activities also provide an outlet for mental tension and anxiety as well as a diversion from other human activities. Competition in the various intensive nonresource-related activities also provides an opportunity to share recreational experiences, participate in team play, and gain understanding of other human beings.

**STANDARD**

A sufficient number of facilities for participation in intensive nonresource-oriented outdoor recreation activities should be provided throughout the Region. To achieve this standard, the following per capita requirements and design criteria for various facilities should be met as indicated below:

Table 10 (continued)

Minimum Per Capita Facility Requirements <sup>a</sup>				Design Standards					Service Radius of Facility (miles) <sup>f</sup>
Activity . . .	Facility	Owner	Facility Per 1,000 Urban Residents	Typical Location of Facility	Facility Requirements (acres per facility)	Additional Suggested Support Facilities	Support Facility Requirements (acres per facility)	Total Land Requirement (acres per facility)	
Baseball . . .	Diamond	Public Nonpublic Total	0.09 0.01 0.10 <sup>d</sup>	Types II, III, and IV general use site	2.8 acres per diamond	Parking (30 spaces per diamond) Night lighting <sup>g</sup> Concessions and bleachers <sup>h</sup> Buffer and landscape	0.28 acre per diamond -- 0.02 acre minimum 1.40 acres per diamond	4.5	2.0
Basketball	Goal	Public Nonpublic Total	0.91 0.22 1.13	Type IV general use site	0.07 acre per goal		--	0.07	0.5
Ice-Skating	Rink	Public Nonpublic Total	0.15 <sup>d</sup> -- 0.15	Type IV general use site	0.30 acre per rink minimum	Warming house	0.05 acre --	0.35 minimum	0.5
Playfield Activities	Playfield	Public Nonpublic Total	0.39 0.11 0.50	Type IV general use site	1.0 acre per playfield minimum	Buffer area	0.65 acre minimum	1.65 minimum	0.5
Playground Activities	Playground	Public Nonpublic Total	0.35 0.07 0.42	Type IV general use site	0.25 acre per playground minimum	Buffer and landscape	0.37 acre	0.62 minimum	0.5
Softball . . .	Diamond	Public Nonpublic Total	0.53 0.07 0.60	Types II, III, and IV general use site	1.70 acre per diamond	Parking (20 spaces per diamond) Night lighting <sup>g</sup> Buffer	0.18 acre per diamond -- 0.80 acre per diamond	2.68	1.0
Swimming	Pool	Public Nonpublic Total	0.015 <sup>d</sup> -- 0.015	Types II and III general use site	0.13 acre per pool minimum	Bathhouse and concessions Parking (400 square feet per space) Buffer and landscaping	0.13 acre minimum 0.26 acre minimum 0.70 acre minimum	1.22 minimum	3.0
Tennis . . . .	Court	Public Nonpublic Total	0.50 0.10 0.60	Types II, III, and IV general use site	0.15 acre per court	Parking (2.0 spaces per court) Night lighting <sup>g</sup> Buffer	0.02 acre per court -- 0.15 acre per court	0.32	1.0

**OBJECTIVE NO. 3**

The provision of sufficient outdoor recreation facilities to allow the resident population of the Region adequate opportunity to participate in intensive resource-oriented outdoor recreation activities.

**PRINCIPLE**

Participation in intensive resource-oriented outdoor recreation activities including camping, golf, picnicking, downhill skiing, and stream and lake swimming provides an opportunity for individuals to experience the exhilaration of recreational activity in natural surroundings as well as an opportunity for physical exercise. In addition, the family can participate as a unit in certain intensive resource-oriented activities such as camping, picnicking, and beach swimming.

**STANDARD**

A sufficient number of facilities for participation in intensive resource-oriented outdoor recreation activities should be provided throughout the Region. To meet this standard, the following per capita requirements and design criteria for various facilities should be met as indicated below:

Table 10 (continued)

Minimum Per Capita Facility Requirement <sup>TM</sup>				Design Standards						Service Radius of Facility (miles) <sup>N</sup>
Activity	Facility	Owner	Per Capita Requirements (facility per 1,000 residents)	Typical Location of Facility	Facility Requirements (acres per facility)	Additional Suggested Support Facilities	Support Facility Requirements (acres per facility)	Total Land Requirements (acres per facility)	Resource Requirements	
Camping	Camp site	Public Nonpublic Total	0.35 1.47 1.82	Types I and II general use sites	0.33 acre per camp site	Rest rooms - showers Utility hookups Natural area backup lands	... ... 1.5 acres per camp site	1.83	Ungrazed wooded area Presence of surface water Suitable topography and soils	25.0
Golf	Regulation 18 hole course	Public Nonpublic Total	0.013 0.027 0.040	Types I and II general use sites	135 acres per course	Clubhouse, parking, maintenance Practice areas Woodland-water areas Buffer area	8.0 acres per course 5.0 acres per course 35.0 acres per course 2.0 acres per course	185.0	Suitable topography and soils Presence of surface water Form-giving vegetation desirable	10.0
Picnicking	Tables	Public Nonpublic Total	6.35 <sup>Y</sup> 2.39 8.74	Types I, II, III, and IV general use sites	0.07 acre per table minimum	Parking  Shelters and grills Buffer and parking overflow	0.02 acre per table (11.5 spaces per table) ... 0.02 acre per table	0.11	Topography with scenic views Shade trees Presence of surface water desirable Suitable soils	10.0
Skiing	Developed Slope (acres)	Public Nonpublic Total	0.010 0.090 0.100	Types I, II and III general use sites	1.0 acre per acre of developed slope	Chairs Parking Ski tows (and lifts) Buffer and maintenance Landscape	0.13 acre minimum 0.25 acre per acre of slope 0.40 tow per acre of slope 0.40 acre per acre of slope 0.35 acre per acre of slope	2.1	Suitable topography and soils  120 percent slope minimum North or northeast exposure	25.0
Swimming	Beach (linear feet)	Major Inland Lakes Lake Michigan Public Nonpublic Total	6 12 18 16 16	Types I, II, and III general use sites	40 square feet per linear foot (average)	Parking Bathhouse-concessions Buffer area	0.2 acre per acre of beach 0.10 acre minimum 10 square feet per linear foot	... <sup>Z</sup>	Natural beach Good water quality	10.0

**OBJECTIVE NO. 4**

The provision of sufficient outdoor recreation facilities to allow the resident population of the Region adequate opportunity to participate in extensive land-based outdoor recreation activities.

**PRINCIPLE**

Participation in extensive land-based outdoor recreation activities including bicycling, hiking, horseback riding, nature study, pleasure driving, ski touring, and snowmobiling provides opportunity for contact with natural, cultural, historic, and scenic features. In addition, such activities can increase an individual's perception and intensify awareness of the surroundings, contribute to a better understanding of the environment, and provide a wider range of vision and comprehension of all forms of life both as this life may have existed in the past and as it exists in the present. Similar to intensive resource-oriented activity, the family as a unit also can participate in extensive land based recreation activities; such participation also serves to strengthen social relationships within the family. For activities like bicycling, hiking, and nature study, participation provides an opportunity to educate younger members of the family in the importance of environmental issues which may become of greater concern as they approach adulthood.

**STANDARD**

A sufficient number of facilities for participation in extensive land-based outdoor recreation activities should be provided throughout the Region. Public facilities provided for these activities should be located within the linear resource-oriented recreation corridors identified in Objective 1. To meet this standard, the following per capita requirements and design criteria for various facilities should be met as indicated below:

Table 10 (continued)

Minimum Per Capita Public Facility Requirements <sup>aa</sup>			Design Standards				
Activity	Facility	Per Capita Requirements (linear mile per 1,000 residents)	Typical Location of Facility	Minimum Facility Requirements (acres per linear mile)	Suggested Support Facilities and Backup Lands	Minimum Support Facility Requirements (acres per linear mile)	Resource Requirements
Biking	Route	-- <sup>bb</sup>	Scenic roadways	--	Route markers	--	--
	Trail	0.16	Recreation corridor	1.45	Backup lands with resource amenities	24.2	Diversity of scenic, historic, natural, and cultural features Suitable topography (5 percent slope average maximum) and soils
Hiking	Trail	0.16	Recreation corridor	0.73	Backup lands with resource amenities	24.2	Diversity of scenic, historic, natural, and cultural features Suitable topography and soils
Horseback Riding	Trail	0.05	Recreation corridor Type I general use site	1.21	Backup lands with resource amenities	24.2	Diversity of scenic, historic, natural, and cultural features Suitable topography and soils
Nature Study	Center	1 per county	Types I, II, and III general use sites		Interpretive center building Parking	--	Diversity of natural features including a variety of plant and animal species Suitable topography and soils
	Trail	0.02	Recreation corridor Types I, II, and III general use sites	0.73	Backup lands with resource amenities	24.2	Diversity of natural features, including a variety of plant and animal species Suitable topography and soils
Pleasure Driving	Route	-- <sup>cc</sup>	Scenic roadways recreation corridor	--	Route markers	--	--
Ski Touring	Trail	0.02	Recreation corridor Types I and II general use sites	0.97	Backup lands with resource amenities	24.2	Suitable natural and open areas Rolling topography
Snowmobiling	Trail	0.11	Private lands (leased for public use)	1.45	Backup lands, including resource amenities and open lands	24.2	Suitable natural and open areas Suitable topography (8 percent slope average maximum) and soils

**OBJECTIVE NO. 5**

The provision of opportunities for participation by the resident population of the Region in extensive water-based outdoor recreation activities on the major inland lakes and rivers and on Lake Michigan, consistent with safe and enjoyable lake use and maintenance of good water quality.

**PRINCIPLE**

The major inland lakes and rivers of the Region and Lake Michigan accommodate participation in extensive water-based recreation activities, including canoeing, fishing, ice fishing, motorboating, sailing, and water skiing, which may involve unique forms of physical exercise or simply provide opportunities for rest and relaxation within a particularly attractive natural setting. Participation in extensive water-based recreation activities requires access to the major inland lakes and rivers and Lake Michigan and such access should be available to the general public.

**STANDARDS**

1. The maximum number of public access points consistent with safe and enjoyable participation in extensive water-based recreation activities should be provided on the major inland lakes throughout the Region. To meet this standard the following guidelines for access points available for use by the general public on various sized major inland lakes should be met as indicated below:

Table 10 (continued)

Size of Major Lake (acres)	Minimum Number of Access Points—Public and Private	Optimum Number of Parking Spaces
50 - 199	1	$\frac{A}{16.6} - \frac{D^{dd}}{10}$ Minimum: <sup>ee</sup> 6
200 or more	Minimum of 1 or 1 per 1,000 acres of usable surface <sup>ff</sup>	$\frac{A}{15.9} - \frac{D^{gg}}{10}$ Minimum: <sup>ee</sup> 12

2. The proper quantity of public access points consistent with safe and enjoyable participation in the various extensive water-based recreation activities should be provided on major rivers throughout the Region. To meet this standard the maximum interval between access points on canoeable rivers<sup>hh</sup> should be 10 miles.

3. A sufficient number of boat launch ramps consistent with safe and enjoyable participation in extensive water-based outdoor recreation activities should be provided along the Lake Michigan shoreline within harbors-of-refuge. To meet this standard the following guidelines for the provision of launch ramps should be met:

Minimum Per Capita Facility Requirements (ramps per 1,000 residents)	Design Standards				Maximum Distance Between Harbors of Refuge
	Typical Location of Facility	Facility Area Requirements	Suggested Support Facilities, Services and Backup Lands	Support Facility Area Requirements	
0.025	Types I, II, and III general use sites	0.015 acre per ramp	Rest rooms Parking (40 car and trailer spaces per ramp)	0.64 acre per ramp minimum	15 miles

4. A sufficient number of boat slips consistent with safe and enjoyable participation in extensive water-based outdoor recreation activities should be provided at marinas within harbors-of-refuge along the Lake Michigan shoreline. To meet this standard the following guidelines for the provision of boat slips should be met:

Minimum Per Capita Facility Requirements (boat slips per 1,000 residents)	Design Standards			Support Facility Area Requirements
	Typical Location of Facility	Facility Area Requirements	Suggested Support Facilities, Services, and Backup Lands	
1.3	Types I, II, and III general use sites		Fuel, concessions, rest rooms Parking Storage and maintenance	0.01 acre per boat slip 0.01 acre per boat slip

## Table 10 (continued)

### OBJECTIVE NO. 6

The preservation of sufficient high-quality open-space lands for protection of the underlying and sustaining natural resource base and enhancement of the social and economic well being and environmental quality of the Region.

#### PRINCIPLE

Ecological balance and natural beauty within the Region are primary determinants of the ability to provide a pleasant and habitable environment for all forms of life and to maintain the social and economic well being of the Region. Preservation of the most significant aspects of the natural resource base, that is, primary environmental corridors and prime agricultural lands, contributes to the maintenance of ecological balance, natural beauty, and economic well being of the Region.

#### A. PRIMARY ENVIRONMENTAL CORRIDORS

##### PRINCIPLE

The primary environmental corridors are a composite of the best individual elements of the natural resource base including surface water, streams, and rivers and their associated floodlands and shorelands; woodlands, wetlands, and wildlife habitat; areas of groundwater discharge and recharge; organic soils, rugged terrain, and high relief topography; and significant geological formations and physiographic features. By protecting these elements of the natural resource base, flood damage can be reduced, soil erosion abated, water supplies protected, air cleansed, wildlife population enhanced, and continued opportunities provided for scientific, educational, and recreational pursuits.

##### STANDARD

All remaining nonurban lands within the designated primary environmental corridors in the Region should be preserved in their natural state.

#### B. PRIME AGRICULTURAL LANDS

##### PRINCIPLE

Prime agricultural lands constitute the most productive farm lands in the Region and, in addition to providing food and fibre, contribute significantly to maintaining the ecological balance between plants and animals; provide locations close to urban centers for the production of certain food commodities which may require nearby population concentrations for an efficient production-distribution relationship; provide open spaces which give form and structure to urban development; and serve to maintain the natural beauty and unique cultural heritage of southeastern Wisconsin.

##### STANDARDS

1. All prime agricultural lands should be preserved.
2. All agricultural lands should be preserved that surround adjacent high-value scientific, educational, or recreational sites and are covered by soils rated in the regional detailed operational soil survey as having very slight, slight, or moderate limitations for agricultural use.

### OBJECTIVE NO. 7

The efficient and economical satisfaction of outdoor recreation and related open space needs meeting all other objectives at the lowest possible cost.

#### PRINCIPLE

The total resources of the Region are limited, and any undue investment in park and open space lands must occur at the expense of other public investment.

#### STANDARD

The sum total of all expenditures required to meet park demands and open space needs should be minimized.



Table 10 (continued)

**II. LAKE MICHIGAN SHORELAND PUBLIC ACCESS OBJECTIVE, PRINCIPLES, AND STANDARDS  
FORMULATED UNDER THE RACINE COUNTY LAKE MICHIGAN PUBLIC ACCESS STUDY**

**OBJECTIVE NO. 8**

The provision of an integrated system of public park and open space sites and facilities within and related to the natural features of the Lake Michigan shoreland area of Racine County.

**PRINCIPLE**

Lake Michigan and the natural resource amenities along the Lake Michigan shoreline provide a unique setting for outdoor recreation and open space sites and related facilities within such sites. An integrated system of shoreland recreation and public open space sites and facilities can maximize public access to, and enjoyment of, the shoreland area; contribute to the preservation of natural resources within the shoreland area; enhance the aesthetic quality of, and provide an identity for, adjacent urban areas; and contribute to the economic development of adjacent areas.

**A. SHORELAND PARK AND PUBLIC OPEN SPACE SITES**

**PRINCIPLE**

Public park and open space sites within the Lake Michigan shoreland area serve a number of important public purposes. Such sites provide prime locations for participation in a variety of outdoor recreational activities. In addition, well-developed and properly located park and open space sites can contribute to the protection and preservation of the natural resource base of the shoreland area. Moreover, when located adjacent to urbanized and urbanizing areas, shoreland park and open space sites can significantly increase the attractiveness of such areas, provide relief from intensive forms of urban development, and provide quiet space adjacent to urbanized areas for passive activities, rest, and reflection.

**STANDARD**

A minimum of 40 percent of the length of the Lake Michigan shoreline of Racine County should be maintained as public park and open space sites.

**B. SHORELAND RECREATIONAL FACILITIES**

**PRINCIPLE**

Outdoor recreation facilities provide opportunities to participate in a wide range of active and passive recreational pursuits within the shoreland area. Certain facilities which must be located within individual outdoor recreation sites provide opportunities for activities such as swimming, shore fishing, and beach activities. These facilities promote the use and enjoyment of natural resource features unique to the Lake Michigan shoreline. Other facilities—namely, recreational trails and routes which must be located along linear corridors or within or through large outdoor recreation sites—can link individual shoreland sites. Recreationalists using such trails and routes can experience the full spectrum of coastal environments, which range from intensively developed harbor areas to more natural shoreline reaches in less developed areas. These trails and routes also provide improved access to and enjoyment of individual outdoor recreation sites located along the Lake Michigan shoreline.

**STANDARDS**

1. A variety of outdoor recreation facilities for participation in activities related to, and enhanced by, natural features associated with Lake Michigan and the Lake Michigan shoreline, including facilities for swimming, beach activities, trail activities, and passive recreation should be provided in Racine County.

a. To meet this standard, the following maximum distances between sites with facilities for swimming, beach activities, and passive recreation should be met:

- i. Swimming beach—six-mile maximum interval.
- ii. Beach activity—including sunbathing and activities which require direct access to the lake shoreline—four-mile maximum interval.
- iii. Passive recreation—including picnicking, rest and reflection, and other passive recreation activities which require only visual access to the lake shoreline—two-mile maximum interval.

**Table 10 (continued)**

b. To meet this standard, the following criteria for routes and paths for pleasure driving, biking, and walking should be met:

- i. Pleasure driving—a continuous route on public roadways within and between urban areas along the Lake Michigan shoreline in southeastern Wisconsin which connects parks, other open space sites, and historic sites within the shoreland area should be identified and designated. Within large metropolitan areas such as Racine, a segment of this coastal route having a minimum length of 2.5 miles should provide an uninterrupted view of Lake Michigan or shoreland park and open space sites.
- ii. Biking—a continuous continuation of “on-the-road” and “off-the-road” routes within and between urban areas along the Lake Michigan shoreline in southeastern Wisconsin which connects parks, other open space sites, and historic sites within the shoreland area should be identified and designated.
- iii. Walking paths—pedestrian paths should be provided to connect all park and open space sites along the Lake Michigan shoreline which are not more than 1,000 feet apart. Such paths should also be provided within all park and open space sites having 1,000 feet or more of frontage along the Lake Michigan shoreline.

2. Shoreland recreational facilities should be properly related to existing urban development and to the natural resource base. Specifically, disruptive impacts attendant to providing additional recreational facilities within residential areas should be minimized. In addition, the disturbance of natural or “near-natural” areas attendant to additional recreational development within the shoreland area should be minimized.

<sup>a</sup> *In urban areas facilities for intensive nonresource-oriented activities are commonly located in Type III or Type IV school outdoor recreation sites. These facilities often provide a substitute for facilities usually located in parks by providing opportunities for participation in intensive nonresource-oriented activities. It is important to note, however, that school outdoor recreation sites do not generally contain natural areas which provide space for passive recreation use.*

<sup>b</sup> *The identification of a maximum service radius for each park type is intended to provide another guideline to assist in the determination of park requirements and to assure that each resident of the Region has ready access to the variety of outdoor recreation facilities commonly located in parks, including space and facilities for both active and passive outdoor recreational use.*

<sup>c</sup> *The identification of a maximum service radius for each school site is intended to assist in the determination of active outdoor recreation facility requirements and to assure that each urban resident has ready access to the types of active intensive nonresource-oriented facilities commonly located in school recreation areas.*

<sup>d</sup> *For Type I and Type II parks, which generally provide facilities for resource-oriented outdoor recreation activities for the total population of the Region, the minimum per capita acreage requirements apply to the total resident population of the Region. For Type III and Type IV sites, which generally provide facilities for intensive nonresource-oriented outdoor recreation activities primarily in urban areas, the minimum per capita acreage requirements apply to the resident population of the Region residing in urban areas.*

<sup>e</sup> *Urban areas are defined as areas containing a closely spaced network of minor streets which include concentrations of residential, commercial, industrial, governmental, or institutional land uses having a minimum total area of 160 acres and a minimum population of 500 persons. Such areas usually are incorporated and are served by sanitary sewerage systems. These areas have been further classified into the following densities: low-density urban areas or areas with 0.70 to 2.29 dwelling units per net residential acre, medium-density urban areas or areas with 2.30 to 6.99 dwelling units per net residential acre, and high-density urban areas or areas with 7.00 to 17.99 dwelling units per net residential acre.*

<sup>f</sup> *For public school sites, which generally provide facilities for intensive nonresource-oriented outdoor recreation activities, the minimum per capita acreage requirements apply to the resident population of the Region residing in urban areas.*

<sup>g</sup> *Type I sites are defined as large outdoor recreation sites having a multicounty service area. Such sites rely heavily for their recreational value and character on natural resource amenities and provide opportunities for participation in a wide variety of resource-oriented outdoor recreation pursuits.*

<sup>h</sup> *A passive activity area is defined as an area within an outdoor recreation site which provides an opportunity for such less athletic recreational pursuits as pleasure walking, rest and relaxation, and informal picnicking. Such areas generally are located in parks or in urban open space sites, and usually consist of a landscaped area with mowed lawn, shade trees, and benches.*

<sup>i</sup> *Type II sites are defined as intermediate size sites having a countywide or multicommunity service area. Like Type I sites, such sites rely for their recreational value and character on natural resource amenities. Type II parks, however, usually provide a smaller variety of recreation facilities and have smaller areas devoted to any given activity.*

Table 10 (continued)

- <sup>j</sup> In general, each resident of the Region should reside within 10 miles of a Type I or Type II park. It should be noted, however, that within urban areas having a population of 40,000 or greater, each urban resident should reside within four miles of a Type I or Type II park.
- <sup>k</sup> Type III sites are defined as intermediate size sites having a multineighborhood service area. Such sites rely more on the development characteristics of the area to be served than on natural resource amenities for location.
- <sup>l</sup> In urban areas the need for a Type III park is met by the presence of a Type II or Type I park. Thus, within urban areas having a population of 7,500 or greater, each urban resident should be within two miles of a Type III, II, or I park.
- <sup>m</sup> The service radius of school outdoor recreation sites, for park and open space planning purposes, is governed primarily by individual outdoor recreation facilities within the school site. For example, school outdoor recreation sites which provide such facilities as playfields, playgrounds, and basketball goals typically have a service radius of one-half mile, which is the maximum service radius assigned to such facilities (see standards presented under Objective No. 2). As another example, school outdoor recreation sites which provide tennis courts and softball diamonds typically have a service radius of one mile, which is the maximum service radius assigned to such facilities (see standards presented under Objective No. 2). It is important to note that areas which offer space for passive recreational use are generally not provided at school outdoor recreation sites, and therefore Type III and Type IV school sites generally do not meet Type III and Type IV park accessibility requirements.
- <sup>n</sup> Type IV sites are defined as small sites which have a neighborhood as the service area. Such sites usually provide facilities for intensive nonresource-oriented outdoor recreation activities and are generally provided in urban areas. Recreation lands at the neighborhood level should most desirably be provided through a joint community-school district venture, with the facilities and recreational land area required to be provided on one site available to serve the recreation demands of both the school student and resident neighborhood population. Using the Type IV park standard of 1.7 acres per thousand residents and the school standard of 1.6 acres per thousand residents, a total of 3.3 acres per thousand residents or approximately 21 acres of recreation lands in a typical medium-density neighborhood would be provided. These acreage standards relate to lands required to provide for recreation facilities typically located in a neighborhood and are exclusive of the school building site and associated parking area and any additional natural areas which may be incorporated into the design of the park site such as drainageways and associated storm water retention basins, areas of poor soils, and floodland areas.
- <sup>o</sup> The maximum service radius of Type IV parks is governed primarily by the population densities in the vicinity of the park. In high-density urban areas, each urban resident should reside within 0.5 mile of a Type IV park; in medium-density urban areas, each resident should reside within 0.75 mile of a Type IV park; and in low-density urban areas, each urban resident should reside within one mile of a Type IV park. It should be noted that the requirement for a Type IV park also is met by a Type I, II, or III park within 0.5-1.0 mile service radius in high-, medium-, and low-density urban areas, respectively. Further, it should be noted that in the application of the service radius criterion for Type IV sites, only multiuse parks five acres or greater in area should be considered as satisfying the maximum service radius requirement. Such park sites generally provide areas which offer space for passive recreational uses, as well as facilities which provide opportunities for active recreational uses.
- <sup>p</sup> A recreation corridor is defined as a publicly owned continuous linear expanse of land which is generally located within scenic areas or areas of natural, cultural, or historical interest and which provides opportunities for participation in trail-oriented outdoor recreation activities especially through the provision of trails designated for such activities as biking, hiking, horseback riding, nature study, and ski touring. In the Region in 1973 only Milwaukee County, with an extensive parkway system, and the Wisconsin Department of Natural Resources, with the Kettle Moraine State Forest—Southern Unit, possessed the continuous linear lands required to develop such a recreation corridor.
- <sup>q</sup> Facilities for intensive nonresource-oriented outdoor recreation activities generally serve urban areas. The minimum per capita requirements for facilities for intensive nonresource-oriented outdoor recreation activities, therefore, apply to the total resident population in each urban area of the Region.
- <sup>r</sup> For each facility for intensive nonresource-oriented activity, the service radius indicates the maximum distance a participant should have to travel from his place of residence to participate in the corresponding activity.
- <sup>s</sup> Each urban area having a population of 2,500 or greater should have at least one baseball diamond.
- <sup>t</sup> Support facilities such as night lighting, concessions, and bleachers generally should not be provided in Type IV sites. These sites typically do not contain sufficient acreage to allow adequate buffer between such support facilities and surrounding neighborhood residences.
- <sup>u</sup> Each urban area should have at least one ice-skating rink.
- <sup>v</sup> Each urban area having a population of 7,500 or greater should have one public swimming pool or beach.

Table 10 (continued)

<sup>w</sup> Facilities for intensive resource-oriented activities serve both rural and urban residents of the Region. The minimum per capita requirements for facilities for intensive resource-oriented activities, therefore, apply to the total resident population of the Region.

<sup>x</sup> Participants in intensive resource-oriented outdoor recreation activity travel relatively long distances from their home. The approximate service radius indicates the normal maximum distance a participant in the respective resource-oriented activity should have to travel from his place of residence to participate in the corresponding activity.

<sup>y</sup> The allocation of the 6.35 picnic tables per thousand residents to publicly owned general-use sites is as follows: 3.80 tables per thousand residents of the Region to be located in Type I and Type II parks to meet the resource-oriented picnicking needs of the Region and 2.55 tables per thousand residents of urban areas in the Region to be located in Type III and Type IV parks to meet local picnicking needs in urban areas of the Region.

<sup>z</sup> A picnic area is commonly provided adjacent to a swimming beach as a support facility. Thus, the total amount of acreage required for support facilities must be determined on a site-by-site basis.

<sup>aa</sup> Both urban and rural residents of the Region participate in extensive land-based outdoor recreation activities. Thus, minimum per capita requirements for trails for extensive land-based activities apply to the total resident population of the Region.

<sup>bb</sup> Bike routes are located on existing public roadways; therefore, no requirement is provided.

<sup>cc</sup> Pleasure driving routes are located on existing public roadways; therefore, no requirement is provided. However, a recreation corridor may provide a uniquely suitable area for the development of a system of scenic driving routes.

<sup>dd</sup> The survey of boat owners conducted under the regional park study indicated that for lakes of 50-199 acres, the typical mix of fast boating activities is as follows: waterskiing—49 percent; motor boating—35 percent; and sailing—16 percent. The minimum area required per boat for safe participation in these activities is as follows: waterskiing—20 acres; motor boating—15 acres; and sailing—10 acres. Assuming the current mix of boating activities in conjunction with the foregoing area requirements, it is found that 16.6 acres of "usable" surface water are required per boat on lakes of 50-199 acres. The number of fast boats which can be accommodated on a given lake of this size range is the usable surface area of that lake expressed in acres (A) divided by 16.6. The optimum number of parking spaces for a given lake is the number of fast boats which the lake can accommodate reduced by the number of fast boats in use at any one time by owners of property with lake frontage. The latter figure is estimated as 10 percent of the number of dwelling units (D) on the lake.

<sup>ee</sup> The minimum number of parking spaces relates only to parking to accommodate slow boating activities such as canoeing and fishing and is applicable only in the event that the application of the standard indicated a need for less than six parking spaces for fast boating activities. No launch ramp facilities would be provided for slow boating activities.

<sup>ff</sup> Usable surface water is defined as that area of a lake which can be safely utilized for motor boating, sailing, and waterskiing. This area includes all surface water which is a minimum distance of 200 feet from all shorelines and which is free of submerged or surface obstacles and at least five feet in depth.

<sup>gg</sup> The survey of boat owners conducted under the regional park study indicated that, for lakes of 200 acres or more, the typical mix of fast boating activities is as follows: waterskiing—43 percent; motor boating—33 percent; and sailing—24 percent. The minimum area required per boat for safe participation in these activities is as follows: waterskiing—20 acres; motor boating—15 acres; and sailing—10 acres. Assuming the current mix of boating activities in conjunction with the foregoing area requirements, it is found that 15.9 acres of "usable" surface water are required per boat on lakes of 200 acres or more. The number of fast boats which can be accommodated on a given lake of this size range is the usable surface area of that lake expressed in acres (A) divided by 15.9. The optimum number of parking spaces for a given lake is the number of fast boats which the lake can accommodate reduced by the number of fast boats in use at any one time by owners of property with lake frontage. The latter figure is estimated as 10 percent of the number of dwelling units (D) on the lake.

<sup>hh</sup> Canoeable rivers are defined as those rivers which have a minimum width of 50 feet over a distance of at least 10 miles.

Source: SEWRPC.

The foregoing seven objectives and related principles and standards address the full range of needs for park and open space sites and the need for outdoor recreation facilities in the Southeastern Wisconsin Region, including the needs for sites and facilities providing access to Lake Michigan and to the Lake Michigan shoreline. Particularly relevant to a consideration of public access along the Lake Michigan shoreline are the following objectives and supporting standards: Objective No. 3--Standard No. 1, which recommends the provision of 16 linear feet of Lake Michigan swimming beach for each 1,000 persons residing in the Southeastern Wisconsin Region; Objective No. 5--Standard No. 3, which recommends the provision of 0.025 boat launch ramp within harbors of refuge along the Lake Michigan shoreline for each 1,000 persons residing in the Southeastern Wisconsin Region and which further recommends a maximum interval of 15 miles between harbors of refuge along the Lake Michigan shoreline in southeastern Wisconsin; and Objective No. 5--Standard No. 4, which recommends the provision of 1.3 boat slips within harbors of refuge along the Lake Michigan shoreline for each 1,000 persons residing in the Region.

To supplement the foregoing regional park and open space objectives, the Advisory Committee developed an additional objective calling for the provision of an integrated system of park and open space sites and facilities within the Lake Michigan shoreland area of Racine County. This is presented as Objective No. 8 in Table 10. The principles supporting this objective along with the related standards are also presented in Table 10. A single site-related standard and two facility-related standards were also developed by the Advisory Committee. The basic concepts underlying these standards follow.

#### Shoreland Park and Open Space Site Standard

Lake Michigan shoreland park and open space sites serve a number of important public purposes, particularly when located in and adjacent to large metropolitan areas. Lake Michigan shoreland park and open space sites constitute prime recreational areas; contribute to the protection and preservation of the natural resource base in the coastal area; and, when situated adjacent to intensively developed urban areas, contribute to the overall character and identity of such areas, increase the overall attractiveness of such areas, and provide relief from intensive forms of development. It is, therefore, particularly important that adequate shoreland park and open space sites be provided within urbanized and urbanizing areas of the Lake Michigan shoreline, such as the Racine County area of that shoreline, to secure these public benefits.

While the importance of Lake Michigan shoreland park and open space sites is readily apparent, the quantity of park and open space sites which should be provided is a planning problem, the resolution of which has major implications for the overall quality of life within the coastal area and adjacent inland areas. On one hand, the unique resources of the Lake Michigan shoreland area suggest that the entire shoreland should be held for public recreational and open space use. This position is, however, unreasonable in Racine County due to the highly developed nature of the County's Lake Michigan shoreline and the high cost of acquiring shoreline property and converting it to park and open space use. Indeed, the growing fiscal constraints faced by all units of government make the acquisition of additional shoreline property--developed or undeveloped--increasingly difficult, suggesting that only those shoreline properties having the highest recreational and open space value be acquired and made available for public use.

To assist the Advisory Committee in the formulation of a shoreland park and open space site and facility standard, the Commission staff gathered information regarding shoreline conditions for other Lake Michigan shoreland areas having development characteristics similar to those of Racine County. Within the Southeastern Wisconsin Region, the Lake Michigan coastal counties of Milwaukee, Racine, and Kenosha are similar in several important respects, differences in county population levels notwithstanding. The coastal zone of each county is situated both in or adjacent to large metropolitan areas, and the areas along the shoreline are generally urbanized or urbanizing. In addition, a significant portion of the total shoreline in each county is presently held in park and public open space use. Moreover, aside from the existing park and public open space sites, the shoreland area of each county is relatively intensively developed, and only limited amounts of open space remain available for many competing uses. Owing to these similarities, shoreland areas of Kenosha and Milwaukee Counties, as well as of Racine County, were examined to assist in the development of Lake Michigan park and open space site and facility standards.<sup>1</sup>

As indicated above, park and public open space sites presently comprise a significant portion of the Lake Michigan shoreline of the three most highly urbanized counties within the Southeastern Wisconsin Region. In combination, a total of 20.7 miles, representing about 37 percent of the 55.3 miles of Lake Michigan shoreline in Milwaukee, Racine, and Kenosha Counties consist of public park and open space sites. In Racine County, a total of 4.9 miles,<sup>2</sup> or 34 percent of the 14.4 miles of Lake Michigan shoreline, consists of public park and open space sites; in Kenosha County, 3.2 miles, or 25 percent of the

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<sup>1</sup>It should be noted that four counties within the Southeastern Wisconsin Region--Kenosha, Milwaukee, Ozaukee, and Racine--have shoreline frontage along Lake Michigan. Development conditions within and adjacent to the shoreland area of Ozaukee County differ significantly from conditions along the shoreland areas of Kenosha, Milwaukee, and Racine Counties. Unlike the Lake Michigan shoreline through Kenosha, Milwaukee, and Racine Counties, a substantial portion of the Lake Michigan shoreline in Ozaukee County remains in rural open uses. Moreover, in comparison to Kenosha, Milwaukee, and Racine Counties, only a small portion of the Lake Michigan shoreline in Ozaukee County has been acquired and made available for park and public open space use.

<sup>2</sup>The 4.9 miles of Lake Michigan shoreline held in public park and open space use are comprised of the shorelines of those sites listed in Table 6 in Chapter II of this report--which combined have a total of 25,500 feet of frontage on Lake Michigan--and of the shoreline currently utilized by the Racine Yacht Club and owned by the City of Racine--which has about 500 feet of frontage on Lake Michigan. In addition, it should be noted that two publicly owned sites--the State of Wisconsin lands and federal lands located in the Town of Caledonia currently utilized as a target range by various branches of the military and having a combined total of about 1,200 feet of frontage on Lake Michigan--are not open to the general public and therefore have not been included in the 4.9 miles of public park and open space lands along the Lake Michigan shoreline. Similarly, the City of Racine Sewage Treatment Plant--which has about 2,000 feet of frontage on Lake Michigan--has not been included in this total.

12.6 miles of Lake Michigan shoreline, consists of public park and open space sites; and in Milwaukee County, a total of 12.6 miles, or 45 percent of the 28.3 miles of Lake Michigan shoreline, consists of public park and open space sites. It should be noted that publicly held shoreland areas in Milwaukee County could increase significantly with implementation of plans for additional public park lands along the Lake Michigan shoreline between Grant Park and Bender Park.

While the foregoing information on the extent of existing shoreland within public park and open space sites does not suggest a specific shoreland site standard, it does provide important background information within which a standard can be formulated. After a careful consideration of possible standards, the Advisory Committee recommended as a standard that a minimum of 40 percent of the length of the Lake Michigan shoreline in Racine County be retained as publicly owned park and open space sites. The recommended minimum percentage is somewhat higher than the percentage now provided in Racine County, as well as the average combined percentage now provided for the three urbanized counties within the Southeastern Wisconsin Region. Conversely, the recommended percentage is less than the percentage now provided in Milwaukee County, where a nationally recognized park system has been developed to serve the needs of a county population of almost one million people. Cognizant of the fact that the formulation of a shoreland park and open space site standard necessarily involves value judgments, the Advisory Committee nevertheless recommended this standard as a guide to public park and open space site acquisition and development along the Lake Michigan shoreline, believing the standard to be a reasonable goal given the unique nature of the Lake Michigan shoreland resources, the potential multiple public benefits derived from Lake Michigan shoreland park and open space sites, the limited amount of undeveloped open space lands which remains along the Lake Michigan shoreline of Racine County, and the fiscal constraints faced by all levels of government in an effort to provide additional shoreland park and open space sites.

### Shoreland Recreational Facility Standards

Outdoor recreation facilities located in parks along the Lake Michigan shoreline provide opportunities for a variety of activities related specifically to Lake Michigan, including swimming, beach activities, water-related or enhanced passive recreation, and water-related or enhanced trail and route activities. Standards with respect to each of these activities are presented in Table 10. Like the shoreland park and public open space site standard, the shoreland recreational facility standards were formulated after an examination of existing shoreland conditions in Kenosha, Milwaukee, and Racine Counties, the most highly urbanized coastal counties in southeastern Wisconsin. Also, like the shoreland park and public open space site standard, the shoreland recreational facility standards are largely judgmental in nature. They represent the Advisory Committee's best determination regarding the optimal quantity and distribution of recreational facilities within the shoreland area and attempt to simultaneously recognize the importance of providing readily accessible Lake Michigan shoreland facilities; the importance of providing opportunities for enjoyment of a full range of coastal environments, particularly through trail and route facilities; the limited amount of shoreland area which is available and suitable for additional facility development; and the increasing fiscal constraints faced by all levels of government in efforts to provide additional shoreland recreational facilities.

Swimming, Beach Activities, and Passive Recreation: The standard for facilities for swimming, beach activities, and water-related or enhanced passive recreation presented in Table 10 indicates a maximum interval for each public facility in the study area. The adoption of this maximum-interval standard recognizes that opportunities to participate in such Lake Michigan- and Lake Michigan shoreline-related activities should be provided at regular intervals in order that the benefits provided by the Lake Michigan resource will be readily accessible to the residents of Racine County. The adoption of this standard also recognizes the conditions that exist along the Milwaukee, Racine, and Kenosha County Lake Michigan shoreline and that the shoreline is suitable for the development of recreation facilities only at certain locations.

For public swimming beaches, the recommended maximum interval is six miles. Public swimming beaches are presently provided along the three urbanized coastal counties within southeastern Wisconsin. A total of 18 public swimming beaches--three in Racine County, five in Kenosha County, and 10 in Milwaukee County--provide opportunities to swim in Lake Michigan. On the average, then, one swimming beach is provided approximately every three miles along the 55.3 miles of Lake Michigan shoreline in Racine, Kenosha, and Milwaukee Counties. Thus, the recommended maximum interval is about double the existing average interval between Lake Michigan swimming beaches. There are, nevertheless, reaches of shoreline in Racine County where the recommended standard is not met. It should be noted that a relatively large maximum interval standard is recommended for swimming because, as determined by user surveys conducted under the regional park and open space study, residents of southeastern Wisconsin are generally willing to travel long distances--10 miles or more--to participate in beach swimming; because of the scarcity of shoreline sites which are suitable for swimming without major improvement; and because of the attendant costs for supporting facilities, such as bathhouses, and supporting services, such as lifeguard protection, generally required for safe and enjoyable swimming.

Beach activities such as sunbathing and beachcombing may occur at shoreline beaches regardless of whether or not opportunities for swimming are provided. Beach activities as defined herein require a beach area but not swimmable surface water. For beach activity, the recommended maximum interval is four miles. In the three urbanized coastal counties in southeastern Wisconsin, there are 27 public sites, including swimming beaches, which provide opportunity for beach activities--seven in Racine County, five in Kenosha County, and 15 in Milwaukee County. On the average, then, opportunities for beach activities are provided at approximately two-mile intervals along the 55.3 miles of Lake Michigan shoreline in Racine, Kenosha, and Milwaukee Counties. Thus, the recommended maximum interval is about double the existing average distance between opportunities for such activities. There are, nevertheless, reaches of shoreline in Racine County where the recommended standard is not met. It should be noted that the interval standard for beach activity is shorter than for swimming because of the larger number of sites which are available and suitable for beach activities; because of the lower site development costs; and because areas for beach activities should be provided at regular, relatively closely spaced intervals to allow recreationalists using linear coastal recreational facilities, such as pleasure driving and biking routes, sufficient opportunity to experience the coastal environment from the Lake Michigan shoreline itself.



For passive recreation, including such activities as rest and reflection, informal picnicking, and sightseeing, the recommended maximum interval is two miles. In the three urbanized coastal counties within southeastern Wisconsin, opportunities for passive recreation are provided at 44 locations--14 in Racine County, 10 in Kenosha County, and 20 in Milwaukee County. On the average, then, opportunities for passive recreation are provided at a little over one-mile intervals along the 55.3 miles of Lake Michigan shoreline in Racine, Kenosha, and Milwaukee Counties. Thus, as in the case of swimming and beach activities, the recommended maximum interval is approximately double the average distance between existing opportunities for passive recreation. There are, nevertheless, reaches of shoreline in Racine County where this recommended standard is not met. It should be noted that a relatively short interval standard is recommended for passive shoreland-based areas because of the numerous sites which are suitable for passive recreation use; because of the relatively low development cost of such sites; and because a closely spaced system of passive recreation areas can complement linear shoreland facilities--particularly by serving as nodes along coastal recreational trails and routes which provide scenic viewpoints and areas for rest, informal picnicking, and other forms of passive recreation.

It also should be noted that while shore fishing is a popular activity along the Lake Michigan shoreline in Racine County, facility standards with respect to shore fishing were not developed under this study, nor were relevant standards found in a search of other coastal studies. Fishing along the Racine County shoreline occurs along natural shoreline reaches, from shoreline reaches which are fortified with stone and other forms of revetment, and from breakwaters and piers, particularly at the Racine harbor, at Myers Park, and at Shoop Park. Existing structural improvements--including piers, breakwaters, and shoreline revetments--which are used by shore fishermen were originally provided primarily to create a safe harbor for boats or to protect the shoreline from wave action and erosion. Thus, the provision of shore fishing opportunities is an important by-product of, but not the principal reason for, the construction of such structures. The generally high cost of well-designed and well-constructed shoreline structures combined with the variability of shore fishing conditions as a practical matter preclude the construction of structures solely to accommodate shore fishing without detailed feasibility studies, including benefit-cost analyses. However, when additional structural improvements are required for other purposes along publicly held shoreline reaches, every effort should be made to incorporate provisions for shore fishing activity at the site.

Trail and Route Activities: As previously noted, the characteristics of the Lake Michigan shoreline in Racine County range from the intensively developed harbor and downtown area of the City of Racine to the more natural shoreline reaches of the northern portion of the County. Outdoor recreation trails and routes can provide opportunities to move through and experience the full range of coastal environments and can link outdoor recreation sites which provide access to the Lake Michigan shoreline. As shown in Table 10, the recommended standard indicates that paths and routes for pleasure driving, bicycling, and walking should be provided in the coastal area of Racine County.

For pleasure driving, the standard calls for the identification and designation of a route both within and between the urban areas along the Lake Michigan shoreline which can serve to connect Lake Michigan shoreland parks and

open space sites. It is important to note that because significant areas of intensive urban development exist along the Lake Michigan shoreline the shoreline is often not visible from the existing public roadways near the lake shoreline. Thus, the standard indicates that, while sites providing access to the lakeshore should be connected, the segments of the connecting route may not, as a practical matter, always provide visual access to Lake Michigan or its shoreline. However, as further indicated in Table 10, the standard for Lake Michigan recreation facilities indicates that within large metropolitan areas, such as Racine, a significant segment of this coastal route--having a minimum length of 2.5 miles--should provide an uninterrupted view of Lake Michigan or of shoreland park and open space sites. In the three urbanized coastal counties in southeastern Wisconsin, about 21 miles of the Lake Michigan shoreline or of public parks along the Lake Michigan shoreline are visible from existing public roadways--about three-and-one-half miles in Racine County, four-and-one-half miles in Kenosha County, and 13 miles in Milwaukee County. In addition, it should be noted that there is one continuous two-and-one-half mile segment of roadway having an uninterrupted view of Lake Michigan and its shoreline in Kenosha County, and two two-and-one-half mile segments and one three-and-one-half mile segment having uninterrupted views of Lake Michigan and its shoreline in Milwaukee County. The longest continuous road segment having an uninterrupted view of Lake Michigan and its shoreline in Racine County, however, is only about two-thirds of a mile in length.

For bicycling, the recommended standard calls for the identification and designation of a continuous route, both within and between urban areas along the Lake Michigan shoreline, which connects coastal park and open space sites. According to the standard, the bike route may be "on-the-road" or "off-the-road." As for the pleasure driving route, portions of the coastal bicycle route may necessarily have to be routed over existing roadway segments which do not provide a view of Lake Michigan.

The standard for shoreland recreation facilities also indicates that paths connecting outdoor recreation sites which are located close to, or adjacent to, one another should be connected by pedestrian paths, and that pathways in sites having a large length of Lake Michigan frontage should be provided for pleasure walking.

Open Space Preservation: In addition to indicating the types and distribution of facilities for outdoor recreation activities along and access to Lake Michigan, the standard for shoreland recreation facilities indicates that such facilities should be properly related to the natural resource base, and that any disturbance of natural resource features attendant to the development of such facilities should be minimized. It is also important to note that a standard set forth under Objective No. 6 indicates that existing natural resource features located within the primary environmental corridors should be preserved in natural open space uses.

## Chapter IV

### APPLICATION OF OBJECTIVES, PRINCIPLES, AND STANDARDS

#### INTRODUCTION

The objectives, principles, and standards presented in Chapter III of this report provide the primary basis for the formulation and evaluation of a public access plan for the Racine County Lake Michigan shoreland area. An important intermediate step in the planning process is the application of the related standards to existing population levels and shoreland conditions to identify the extent to which the objectives are now met, as well as the application of the standards to anticipated future population levels and shoreland conditions. A plan may then be formulated to achieve, to the extent practicable, the agreed-upon objectives.

Certain of the agreed-upon objectives may be classified as resource-oriented inasmuch as they pertain to activities which depend on natural resource amenities for their very existence, or to activities for which the quality of the recreational experience is significantly enhanced by the presence of natural resource amenities. Resource-oriented activities within the shoreland area include swimming, beach activities, boating, camping, passive activities, and trail or route activities such as bicycling, hiking, and pleasure driving. The primary concern of the Lake Michigan public access study is the attainment of objectives and standards pertaining to these resource-oriented activities.

Other agreed-upon objectives may be classified as "nonresource-oriented" inasmuch as they pertain to outdoor recreational activities which are not reliant on natural resource amenities, and the quality of the recreational experience is not necessarily enhanced by the presence of natural resource amenities. Nonresource-oriented activities include softball, playfield activities, playground activities, and tennis--activities which are appropriately provided primarily within urban areas. As already noted, the primary concern of the Lake Michigan public access study is the attainment of resource-oriented outdoor recreation objectives and standards. However, the study also addresses nonresource-oriented objectives and standards within the urbanized area adjacent to the Racine County shoreline.

The first section of this chapter presents information regarding existing and anticipated future population levels within the study area, Racine County, and the Southeastern Wisconsin Region. The second section of this chapter describes the results of the application of the resource-oriented outdoor recreation objectives and related standards to existing and probable future population levels and shoreland conditions. The third section of this chapter describes the results of an application of the nonresource-oriented objectives and standards to existing and probable future population levels and conditions within the urbanized portion of the shoreland area.

## EXISTING AND PROBABLE FUTURE POPULATION LEVELS

### Existing Population

The U. S. Bureau of the Census has the responsibility of conducting a census of the population of the United States every 10 years. The most recent census was conducted in 1980 and data from that census indicate that the resident population of the study area was 6,890.<sup>1</sup> The population of the portion of Racine County east of IH 94 was 132,532 in 1980. The populations of Racine County and of the Southeastern Wisconsin Region were 173,132 and 1,764,919, respectively, in 1980.

### Future Population

The projection of probable population levels for any geographic area is a difficult task, accompanied by uncertainties, and subject to periodic revision as new information becomes available. The traditional practice typically followed in determining a future population level to utilize in park and open space planning and other physical development planning has been to prepare a single forecast population level believed to be most representative of future conditions. This traditional approach works well in periods of socioeconomic stability, when historic trends can be anticipated to continue relatively unchanged over the plan design period. During periods of major change in social and economic conditions, however, when there is great uncertainty as to whether historic trends will continue, an alternative to the traditional approach may be required. One such alternative approach proposed in recent years, and utilized to a limited extent at the national level for public and quasi-public planning purposes, is termed "alternative futures." Under this approach, the development, test, and evaluation of alternative plans is based not upon a single most probable forecast of future conditions, but rather upon a number of futures chosen to represent a range of conditions which may be expected to occur over the plan design period.

Recognizing the increasing uncertainty inherent in estimating future population levels, the Regional Planning Commission began incorporating the alternative futures approach into its planning programs in the mid-1970's, the first known attempt to apply this approach to regional planning in the United States. In the exploration of alternative futures for the Southeastern Wisconsin Region, an attempt was made first to identify all those external factors that may be expected to directly or indirectly affect future development in the Region, together with the likely future range of prospects for these factors. Two alternative scenarios for regional growth and change, involving different assumptions regarding three major external factors--the cost, and availability of energy, population lifestyles, and economic conditions--were thus defined. These scenarios represent opposite extremes of the future prospects identified for the external factors and, consequently, indicate relatively large potential differences in future population growth and economic activity. The more optimistic scenario postulates moderate population and

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<sup>1</sup>The 1980 population of the study area was derived by aggregating 1980 census population counts for individual residential blocks comprising the study area.

economic growth; the less optimistic scenario postulates a stable economy and a declining regional population. Two alternative regional land use plans, a centralized plan and a decentralized plan, were then developed for each of the two alternative future scenarios of external factors, thus providing in effect four alternative futures as a framework for physical development planning in the Region.<sup>2</sup>

Population projections for the Southeastern Wisconsin Region, Racine County, the portion of Racine County east of IH 94, and the Racine County coastal area--assuming centralized and decentralized population distributions under moderate growth and stable or declining growth scenarios--are presented in Table 11. It should be noted that the existing and projected population levels for the Racine County coastal area presented in Table 11 were derived by aggregating existing and projected population numbers for individual U. S. Public Land Survey quarter sections which encompass the shoreland study area. The shoreland study area boundary does not generally coincide with Public Land Survey quarter section lines. The quarter sections which have been used to approximate the study area may encompass some urbanized and urbanizing lands immediately adjacent to, but outside, the study area proper.

The anticipated population levels under the centralized land use plan moderate growth scenario are the basis for the adopted regional design year 2000 land use plan. Under that plan, new urban development is encouraged to occur within areas which are now, or which can readily be, served by public sanitary sewer and water supply facilities and basic urban services such as mass transit. The plan proposes a more centralized distribution of the population, thus reversing the trend to population decentralization prevalent within the Region over the last three decades.

Since the adopted regional land use plan population levels are based upon the centralized land use plan moderate growth scenario, they are significantly higher than land use plan population levels under the centralized land use plan stable or declining growth scenario. This alternative future thus represents the maximum anticipated population growth which may be reasonably expected within Racine County and the Southeastern Wisconsin Region. Since land use changes are, for all practical purposes, virtually irreversible, a prudent approach in park and open space planning would be to utilize the higher growth scenario represented by the adopted regional land use plan population level. Such an approach would take into account the maximum growth that may be expected to occur over the next 20 years. The recognized need to plan now for public access to the Lake Michigan shoreland area for future generations beyond the year 2000 further supports the use of the population level of the centralized land use plan moderate growth scenario.

As indicated in Table 11, under the centralized land use plan moderate growth scenario the resident population of the Southeastern Wisconsin Region may be expected to increase from a 1980 level of 1,764,919 persons to 2,219,300 persons by the year 2000--an increase of about 454,381 persons, or 26 percent, over the 20-year period. The 1980 population of Racine County would increase to about 217,000 by the year 2000, an increase of about 43,868 persons, or

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<sup>2</sup>A detailed description of the four alternative futures is presented in SEWRPC Technical Report No. 25, Alternative Futures for Southeastern Wisconsin.

Table 11

**ANTICIPATED POPULATION CHANGES IN RACINE COUNTY AND  
THE SOUTHEASTERN WISCONSIN REGION UNDER  
FOUR GROWTH ALTERNATIVES: 1980-2000**

Area	Existing Population 1980	Moderate Growth Scenario						Stable or Declining Growth Scenario					
		Centralized Land Use Plan			Decentralized Land Use Plan			Centralized Land Use Plan			Decentralized Land Use Plan		
		Projected Population 2000	Change 1980-2000 Number	Percent	Projected Population 2000	Change 1980-2000 Number	Percent	Projected Population 2000	Change 1980-2000 Number	Percent	Projected Population 2000	Change 1980-2000 Number	Percent
Racine County-- Lake Michigan Shoreland Area a....	14,700	17,200	2,500	17.0	17,500	2,800	19.0	14,400	-300	-2.0	14,800	100	0.7
Racine County-- East of IH 94.....	132,532	161,300	28,768	21.7	164,000	31,468	23.7	136,200	3,668	2.8	131,300	-1,232	-0.9
Racine County.....	173,132	217,000	43,868	25.3	224,700	51,568	29.8	180,000	6,868	4.0	180,000	6,868	4.0
Southeastern Wisconsin Region.....	1,764,919	2,219,300	454,381	25.7	2,219,300	454,381	25.7	1,690,000	-74,919	-4.2	1,690,000	-74,919	-4.2

a. Existing and projected population levels for the Racine County Lake Michigan shoreland area were derived by aggregating existing and projected population numbers for individual U. S. Public Land Survey quarter sections which encompass the shoreland study area. The shoreland study area boundary generally does not coincide with Public Land Survey quarter section boundaries. The quarter sections which have been used to approximate the study area may encompass some urbanized and urbanizing lands immediately adjacent to, but outside, the study area proper.

Source: SEMRPC.

25 percent, over the 20-year period. The population of the portion of Racine County east of IH 94 would increase from 132,532 persons in 1980 to 161,300 persons in the year 2000, representing an increase of about 28,768 persons, or 22 percent, over the 20-year period. The population of the Racine County coastal zone, based on the aggregation of data for U. S. Public Land Survey quarter sections which encompass the shoreland study area proper, would increase from a 1980 level of 14,700 persons to 17,200 persons by the year 2000--an increase of 2,500 persons, or 17 percent, under this scenario.

Under the adopted regional land use plan, the additional urban development necessary to accommodate anticipated population increases is encouraged to occur in a centralized fashion, with urban development recommended to occur primarily along the periphery of, and outward from, existing urban areas. Existing (1980) urban development within that portion of Racine County east of IH 94 and additional urban development recommended for that area under the design year 2000 regional land use plan and subsequent refinements of that plan, including the regional water quality management plan, the Pike River watershed plan, and the Racine County farmland preservation plan, are shown on Map 14.

## APPLICATION OF RESOURCE-ORIENTED SITE AND FACILITY STANDARDS

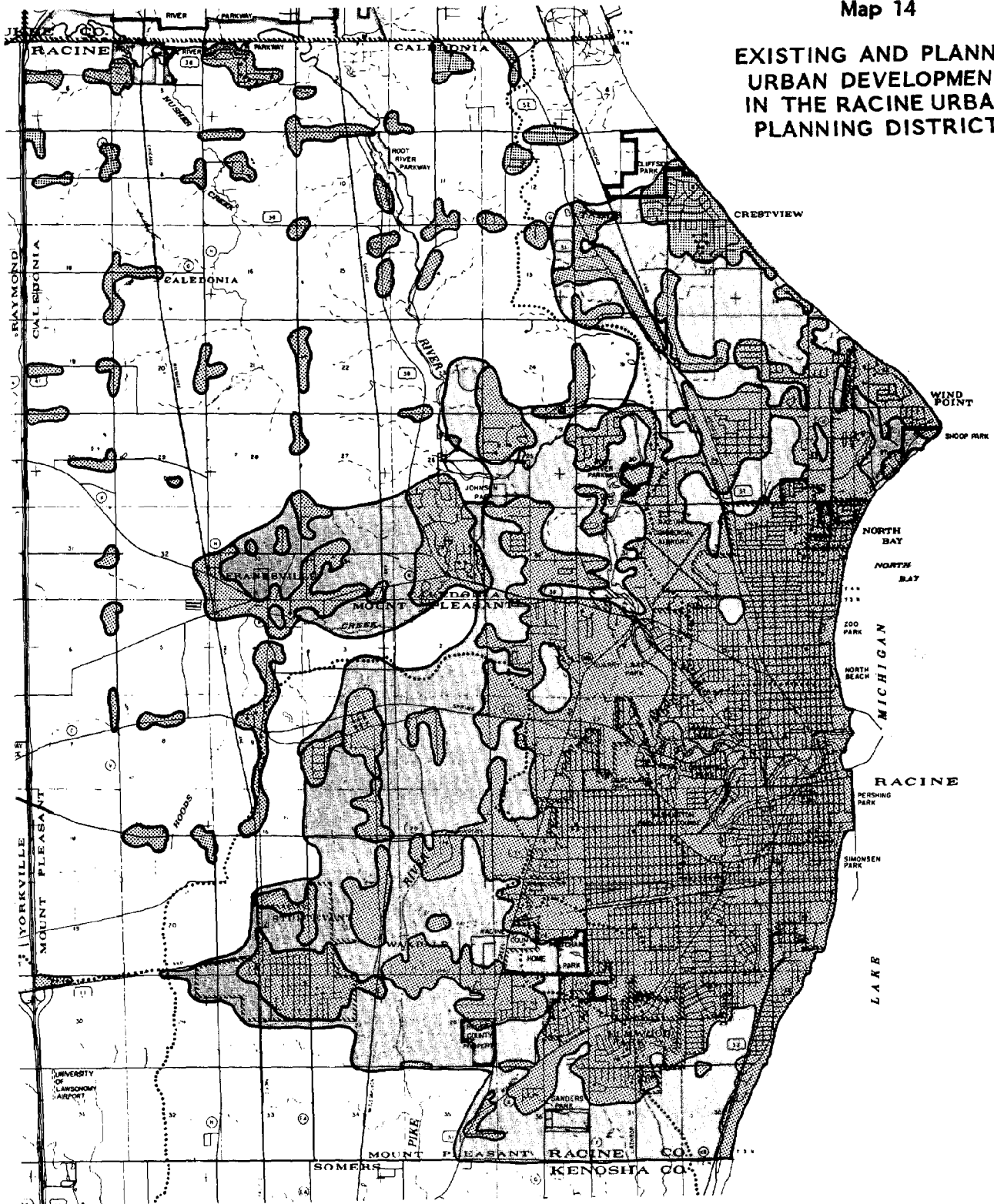
As previously indicated, resource-oriented activities within the Lake Michigan shoreland area include swimming, beach activities, boating, camping, passive activities, and trail or route activities such as biking, hiking, and pleasure driving. The standards associated with the Lake Michigan public access objective formulated by the Racine County Lake Michigan Public Access Study Technical Advisory Committee and standards set forth in the regional park and open space plan provide guides for the provision of sites and facilities to accommodate these activities within the shoreland area.

### Resource-Oriented Sites

Major Parks: Major parks are defined as large, public, general-use, outdoor recreation sites which generally provide opportunities for activities such as camping, golf, and picnicking, and which have a large area containing significant natural resource amenities. Regional park plan standards suggest that such parks encompass a minimum of 250 acres. The regional park and open space plan recommends that Cliffside Park and Johnson Park be maintained as major parks within that portion of Racine County east of IH 94. The application of standards under Objective No. 1 of the regional park and open space plan indicates that there should be no need for additional major parks in this portion of Racine County through the year 2000. It should be noted, however, that Cliffside Park, located along the Lake Michigan shoreline in the Town of Caledonia, currently encompasses approximately 214 acres--36 acres less than the minimum area recommended for major parks in the regional park and open space plan. Moreover, unless measures are taken to stabilize the Lake Michigan bluffs at the eastern edge of the park and to protect the toe of the bluffs, the size of the park may be expected to decrease as a result of continuing bluff recession. A continuation of recent recession rates may be expected to result in the loss of an additional 15 acres of land at this site over the next 20 years.

Map 14

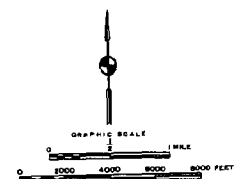
**EXISTING AND PLANNED  
URBAN DEVELOPMENT  
IN THE RACINE URBAN  
PLANNING DISTRICT**



**LEGEND**

-  EXISTING URBAN DEVELOPMENT: 1980
-  PLANNED URBAN DEVELOPMENT: 2000

Source: SEWRPC.





Shoreland Park and Open Space Sites: Lake Michigan shoreland park and open space sites constitute prime recreational areas; contribute to the protection and preservation of the natural resource base; and, when situated adjacent to intensively developed urban areas, contribute to the overall character and identity of such areas, increase their attractiveness and value, and provide relief from intensive forms of urban development. These multiple benefits underscore the importance of providing adequate shoreland park and open space sites, particularly along urbanized areas. The standard adopted by the Advisory Committee recommends that 40 percent of the length of the Racine County Lake Michigan shoreline should consist of public parks and open space sites. Presently, a total of 4.92 miles, or 34.3 percent of the 14.36 miles of Lake Michigan shoreline along Racine County, consist of public park and open space sites. This figure includes the frontage along Cliffside Park, all of the identified city, village, and town park and open space sites, the Olympia Brown School site owned by the Racine Unified School District, and the Racine Yacht Club located on land owned by the City of Racine. Additional public park and open space sites having 0.82 mile of frontage on Lake Michigan would be required to achieve the recommended standard for shoreline park and open space sites.

#### Resource-Oriented Activities

Swimming: The regional park and open space plan established standards regarding the provision of swimming beaches in southeastern Wisconsin, identified related facility needs on the basis of an application of the standards, and set forth general recommendations regarding the provision of additional facilities to achieve the adopted standards. The regional plan recommended the provision of 16 linear feet of swimming beach along the Lake Michigan shoreline within the Region for each 1,000 residents in southeastern Wisconsin. Application of this standard indicated a need for an additional 6,600 linear feet of swimming beach by the plan design year 2000 and set forth general recommendations regarding the distribution of proposed swimming beach facilities required to meet the Lake Michigan swimming beach standard. In this regard, the plan recommended that additional Lake Michigan swimming beach opportunities be provided in association with other Lake Michigan access facilities at Bender Park in Milwaukee County, Virmond Park in Ozaukee County, and Cliffside Park in Racine County. In addition, under the regional plan swimming beaches would be provided at a proposed park site located south of the City of Kenosha in Kenosha County and at a proposed park site located south of the City of Port Washington in Ozaukee County. It is important to recognize that the Lake Michigan swimming beach recommendations contained in the regional park and open space plan are general, systems-level recommendations and that the swimming beach facilities proposed for development at the five aforementioned Lake Michigan park sites are proposed to be developed in conjunction with additional Lake Michigan access facilities and support facilities which would enable safe, enjoyable beach swimming activities.

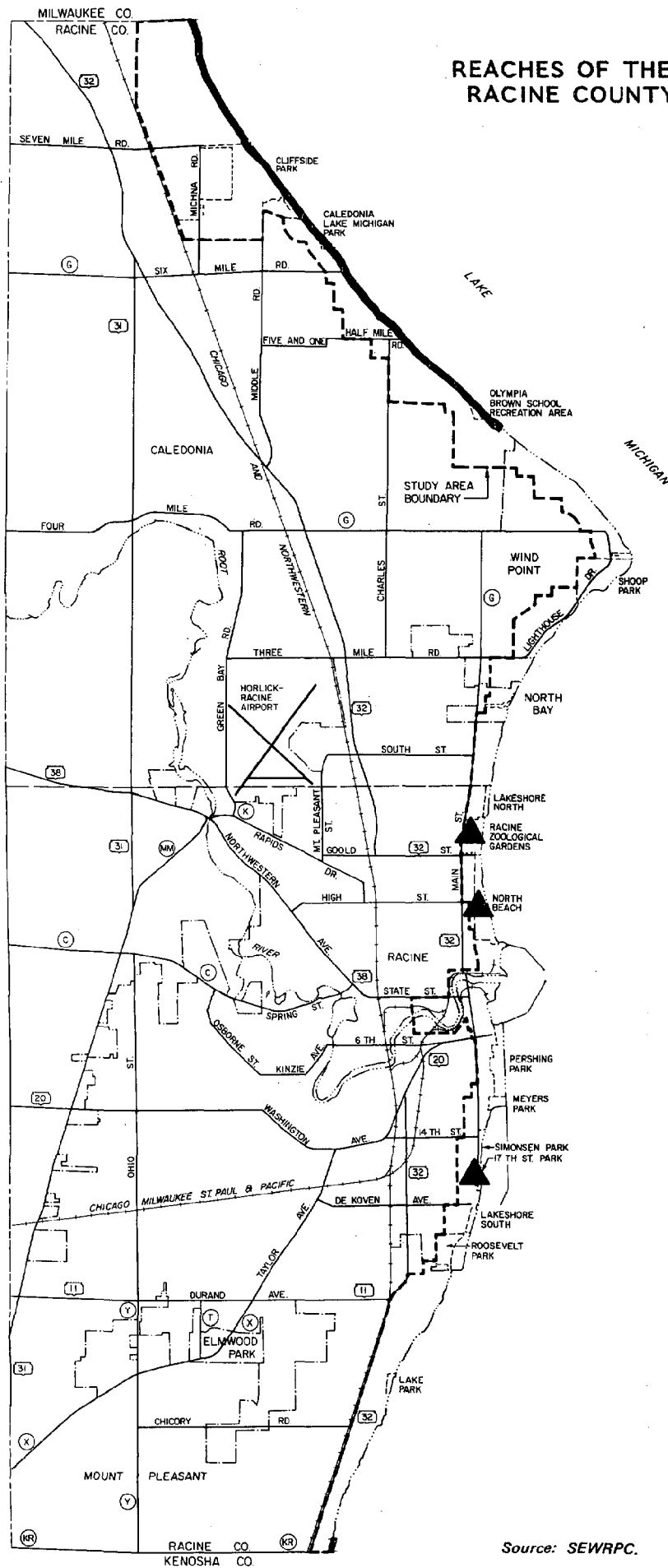
In addition to the standards established under the regional park and open space plan, the Lake Michigan public access study for Racine County also established a maximum interval standard for swimming beaches along the Lake Michigan shoreline. As set forth in Chapter III of this report, the prescribed maximum interval between swimming beaches along the Lake Michigan shoreline in

Racine County is six miles. As shown on Map 15, there are three existing swimming beaches in Racine County, all of which are located within the City of Racine. As further shown on Map 15, there are two reaches of Lake Michigan shoreline in Racine County which do not meet the prescribed maximum interval standard. One reach is located in the northern portion of Racine County and represents the approximately 12½-mile reach of the Lake Michigan shoreline between Zoo Park in the City of Racine and Grant Park in the City of South Milwaukee in which there are no existing opportunities for swimming. It should be noted that two appropriately spaced sites, each providing a swimming beach, would be required to meet the standard interval requirement within this reach in Racine and Milwaukee Counties. The second reach is located in the extreme southern portion of Racine County and represents the approximately seven-mile interval between 17th Street Park in the City of Racine and Alford Park in the City of Kenosha, in which there are no existing opportunities for swimming. Two appropriately spaced sites would also be required to meet the standard interval requirement within this reach in Racine and Kenosha Counties. It is also important to note that both the swimming beach facilities at Zoo Park and 17th Street Park in the City of Racine are informal swimming beaches, that is, no lifeguard services are provided and no bathhouse facilities, restroom facilities, or parking facilities serve these informal swimming beaches. Finally, it is important to note that North Beach provides the only designated, guarded swimming beach along the entire 14-mile shoreline in Racine County.

Beach Activities: As in the case of swimming beaches, a maximum interval standard for the provision of facilities for beach activities was established under the Lake Michigan public access study for Racine County. As set forth in Chapter III of this report, the standard maximum interval for beach activity is four miles. As shown on Map 16, seven existing sites provide opportunities for beach activities in Racine County--17th Street Park, Meyers Park, North Beach, Zoo Park, and Lakeshore North in the City of Racine; the Village park site in the Village of North Bay; and Shoop Park, a city-owned site located in the Village of Wind Point. These sites provide ready access to the shoreline of Lake Michigan and, therefore, provide opportunities for a variety of beach activities. As further shown on Map 16, there are two reaches of shoreline in Racine County which do not meet the standard maximum interval requirement for beach activities. One reach is located in the northern portion of Racine County between a point just south of Five-and-One-Half-Mile Road and the Milwaukee County-Racine County line, and represents a portion of the approximately 10½-mile interval between Shoop Park in the Village of Wind Point and Grant Park in the City of South Milwaukee, in which opportunities for beach activities are not provided. It should be noted that three appropriately spaced sites would be required to meet the standard maximum interval requirement for beach activities within this reach in Racine and Milwaukee Counties. The other shoreline reach is located in the southern portion of Racine County between Chickory Road (extended) and the Racine County-Kenosha County line, and represents the approximately seven-mile interval between 17th Street Park in the City of Racine and Alford Park in the City of Kenosha in which opportunities for beach activity are not provided. Two appropriately spaced, outdoor recreation sites with facilities for beach activities would be required to meet the standard maximum interval requirement for beach activities within this reach in Racine and Kenosha Counties.

Map 15

# REACHES OF THE LAKE MICHIGAN SHORELINE IN RACINE COUNTY LACKING SWIMMING BEACHES



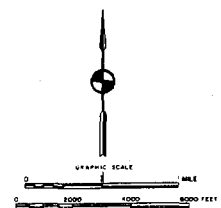
## LEGEND



EXISTING  
SWIMMING BEACH

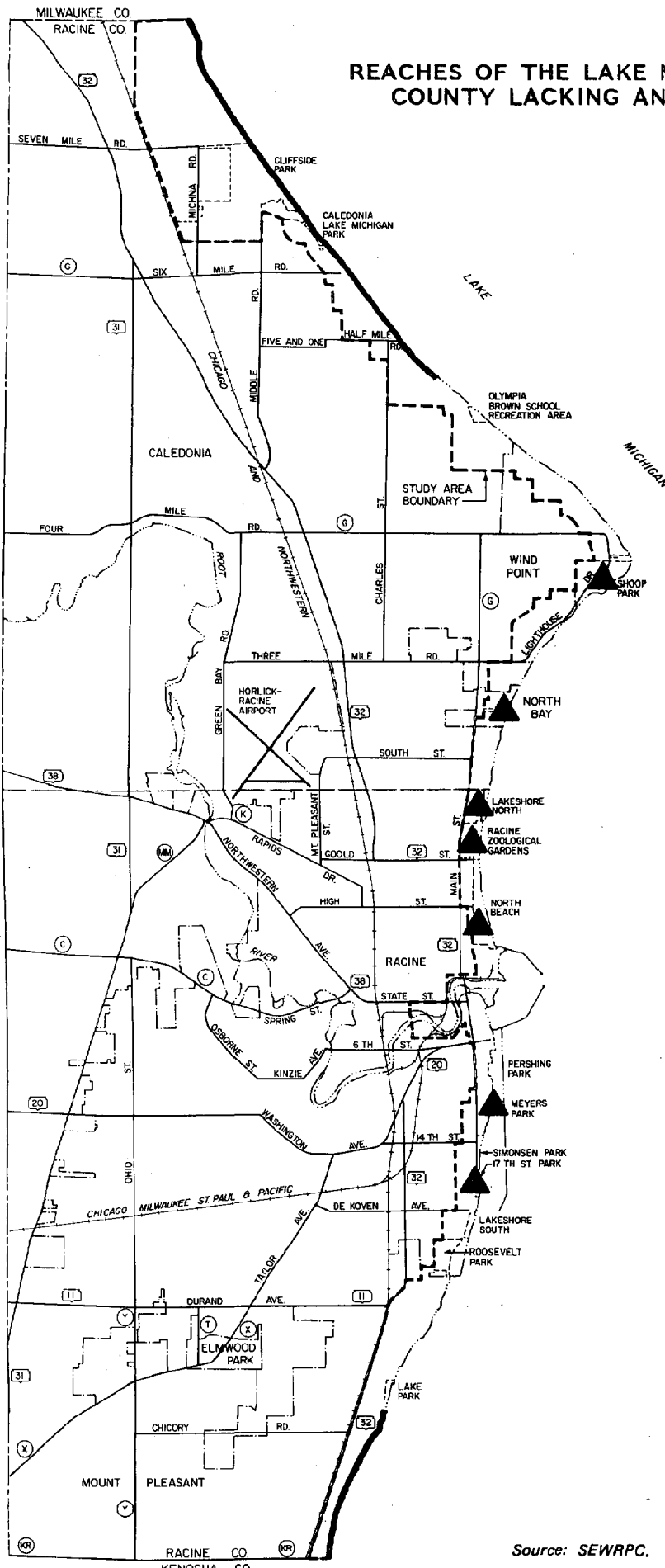


SHORELINE REACH  
LACKING A  
SWIMMING BEACH



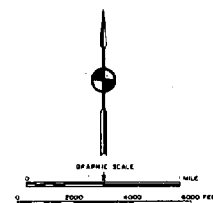
Source: SEWRPC.

# REACHES OF THE LAKE MICHIGAN SHORELINE IN RACINE COUNTY LACKING AN AREA FOR BEACH ACTIVITY



## LEGEND

- ▲ EXISTING AREA FOR BEACH ACTIVITY
- SHORELINE REACH LACKING AN AREA FOR BEACH ACTIVITY



Boating: The regional park and open space plan established standards regarding the provision of harbors of refuge, boat slips, and boat launch ramps along the Lake Michigan shoreline in southeastern Wisconsin; identified related facility needs on the basis of an application of these standards; and set forth general recommendations regarding the provision of additional facilities to achieve the adopted standards. Subsequent work, including studies by the U. S. Army Corps of Engineers and private consultants for the City of Racine and Racine County, have refined the Lake Michigan boat access facility recommendations of the regional park and open space plan for Racine County.

The regional park and open space plan recommended the provision of 1.3 boat slips on Lake Michigan for each 1,000 residents of the Southeastern Wisconsin Region and the provision of 0.025 boat launch ramps on Lake Michigan for each 1,000 residents of the Region. The regional plan further established 15 miles as the maximum distance between Lake Michigan harbors of refuge consistent with safe boating activities. Application of these standards indicated an existing need for nine additional boat launch ramps and 708 additional boat slips along Lake Michigan within the Southeastern Wisconsin Region in 1975 and an anticipated need for 19 additional boat launch ramps and 1,316 additional boat slips by the year 2000. The regional plan also identified two coastal reaches where the 15 mile maximum interval between harbors of refuge was not met. One of these is in the vicinity of Cliffside Park, with the nearest harbors of refuge being the Racine harbor on the south and the boat launch site at the mouth of Oak Creek in the City of South Milwaukee on the north; the other is the reach along the shorelines of Mequon, Bayside, Fox Point, and the northern portion of Whitefish Bay, with the nearest harbors being the Milwaukee harbor on the south and Port Washington harbor on the north.

The regional plan set forth general recommendations regarding the distribution of facilities required to meet the Lake Michigan boat access facility standards. In this regard, the plan recommended that additional boat launch ramps and slips be provided at the Kenosha, Racine, and Port Washington harbors and that harbors of refuge with boat launch ramps and boat slips be developed at Bender Park, and in the vicinity of Doctor's Park in Milwaukee County. Again, it is important to recognize that the Lake Michigan boat facility recommendations of the regional park and open space plan are general, systems-level recommendations that the location and design of facilities to provide safe harbor for recreational boats must be based upon in detailed planning and engineering studies.

In 1974, the U. S. Army Corps of Engineers completed a study of the need for small boat harbors and related facilities on Lake Michigan. The study projected a significant increase in the demand for Lake Michigan boat slips and launch ramps at the Racine and Kenosha harbors and other Lake Michigan harbors in Wisconsin through the year 2000. Based upon this analysis, the Corps of Engineers in 1978 prepared a plan calling for the construction of additional breakwaters within the southern portion of the Racine harbor and the development of a 216-slip marina, six new launch lanes, and additional dry dock storage space. The Racine harbor management study--prepared by McFadzean, Everly, and Associates for the City of Racine in 1980--generally corroborated the demand projections of the Corps of Engineers; but recommended, as an alternative to the marina development proposed by the Corps, the provision by private interests of additional boat slips along the Root River, the conversion of part of the storage area of the Wisconsin Natural Gas Company in the

existing sites provide opportunities for passive recreation along the shoreline in Racine County. As further shown on Map 17, there is one reach of shoreline which does not meet the standard maximum interval requirement for passive recreation. This reach consists of a one-half-mile segment immediately north of the Racine County-Kenosha County line and represents a portion of the five-mile interval between Lake Park in the Town of Mt. Pleasant and Alford Park in the City of Kenosha in which opportunities for passive recreation are not provided. It should be noted that three appropriately spaced sites providing opportunities for passive recreation would be required to meet the standard maximum interval requirement for passive recreation within this reach in Racine and Kenosha Counties.

Trail Activities: Under the Lake Michigan public access study for Racine County, a standard was established for the provision of a variety of trail or linear route facilities, including such facilities as a pleasure driving route, a bicycle trail or route, and walking paths all connecting park and open space sites along the Lake Michigan shoreline.

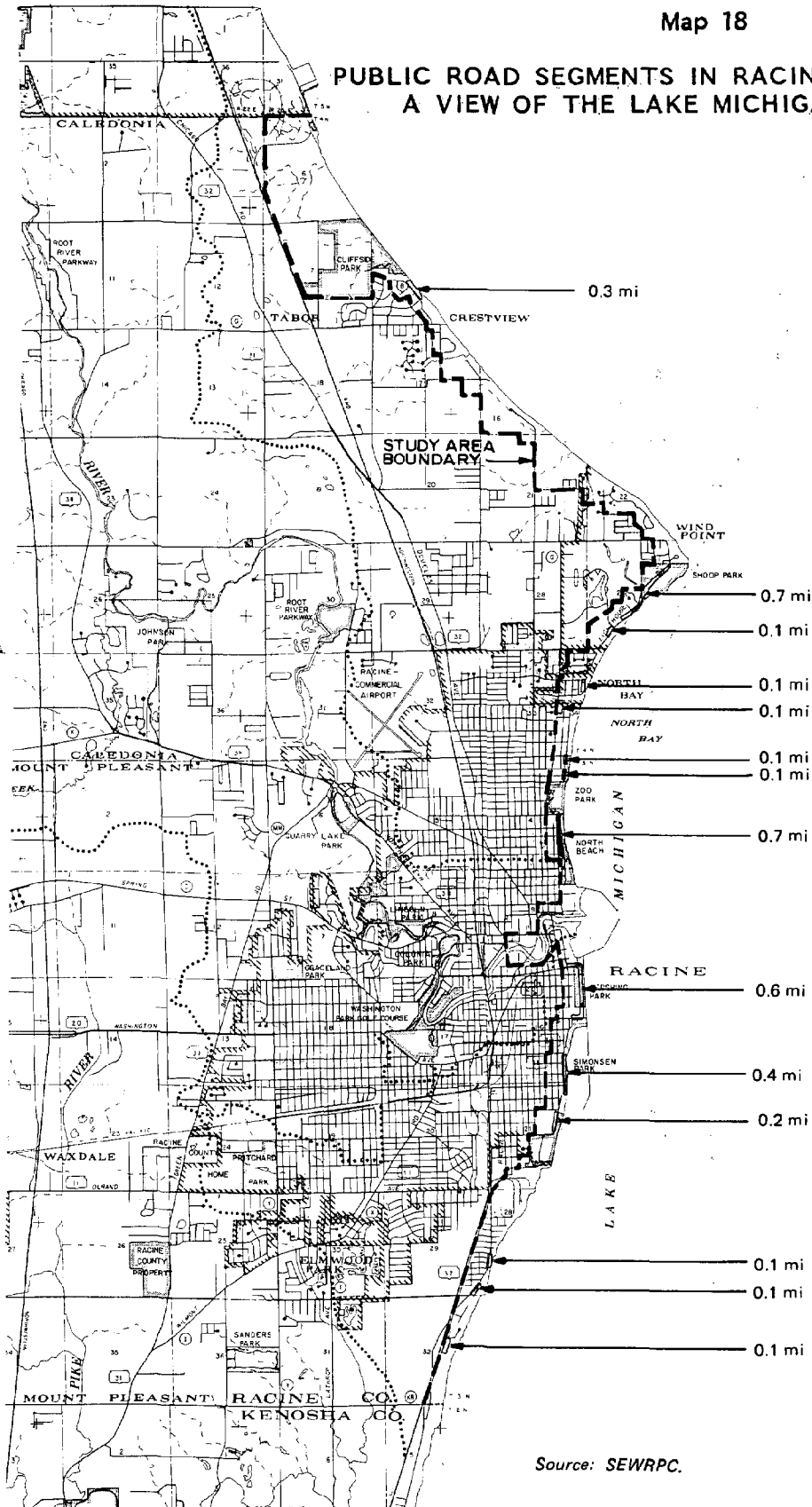
As set forth in Chapter III of this report, the recommended standard for trails and routes indicates that a pleasure drive on public roadways within and between urban areas along the Lake Michigan shoreline should be provided to connect Lake Michigan park and open space sites. Within Racine County in 1982, there were no designated routes connecting park and open space sites along the Lake Michigan shoreline and, in order to meet this standard, public roads which link important park and open space sites along the Lake Michigan shoreline--including but not limited to the following sites: Cliffside Park in the Town of Caledonia; Shoop Park in the Village of Wind Point; Lakeshore North, Zoo Park, North Beach, Pershing Park, Meyers Park, Simonsen Park, and Lakeshore South in the City of Racine; and Lake Park in the Town of Mt. Pleasant--should be identified and designated.

According to the standard set forth in Chapter III, a portion of the coastal drive within the Racine metropolitan area, having a minimum length of 2.5 miles, should provide an uninterrupted view of Lake Michigan and Lake Michigan shoreland parks and open space sites. Those public road segments in Racine County having a view of the Lake Michigan shoreline, along with the length of each segment, are shown on Map 18. As shown on Map 18, there are no continuous segments of public roadway greater than 0.7 mile having a view of the Lake Michigan shoreline. Therefore, in order to meet the recommended standard for a continuous scenic drive at least 2.5 miles in length having a view of the Lake Michigan shoreline, it would be necessary to provide additional roads having a clear view of Lake Michigan which can link existing segments. Such efforts are likely to be costly and disruptive, however, and therefore, this standard may not, as a practical matter, be possible to meet within the Racine County Lake Michigan shoreland area.

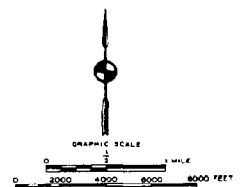
As set forth in Chapter III of this report, a standard calling for the provision of a bike route within and between the urban areas along the Lake Michigan shoreline which connects park and open space sites providing access to Lake Michigan was formulated by the Advisory Committee. As shown on Map 19, this standard generally has been met by the combination of the Racine County bikeway--which is located on Wisconsin Electric Power Company right-of-way generally between the corporate limits of the City of Racine and the Racine-Kenosha County line adjacent to the southern portion of the study area and

Map 18

PUBLIC ROAD SEGMENTS IN RACINE COUNTY HAVING  
A VIEW OF THE LAKE MICHIGAN SHORELINE

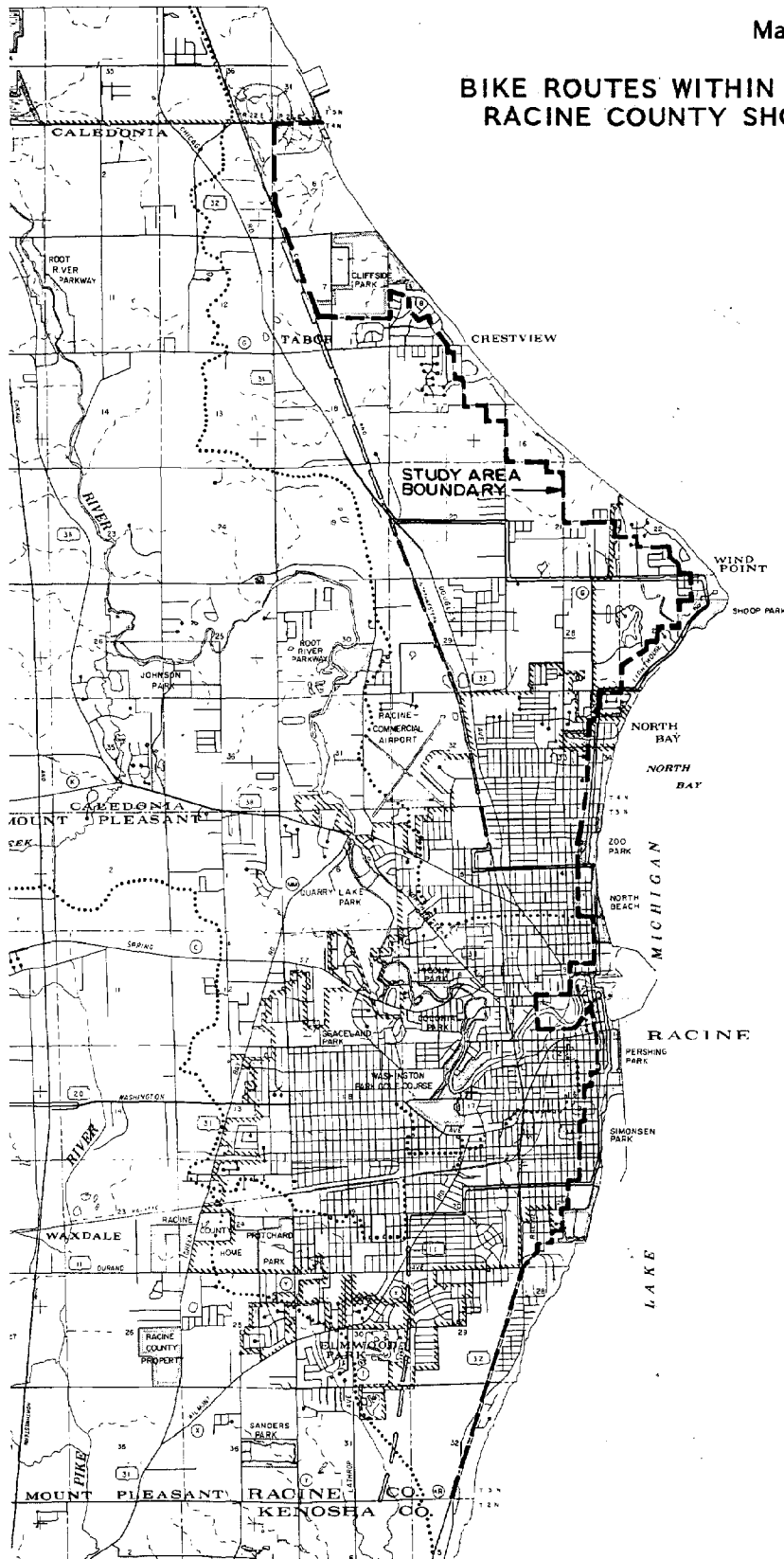


Source: SEWRPC.



Map 19

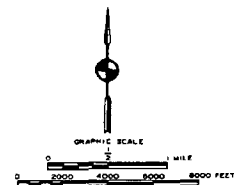
BIKE ROUTES WITHIN AND ADJACENT TO THE  
RACINE COUNTY SHORELAND STUDY AREA



LEGEND

- COUNTY BIKE TRAIL
- CITY BIKE ROUTE

Source: SEWRPC.





on the Wisconsin Electric Power Company right-of-way between the northern corporate limits of the City of Racine and Seven-Mile Road in the Town of Caledonia--and by the designated bike route on public roadways in the City of Racine--which connect the lakeshore parks owned by the City of Racine. It is important to note, however, that to fully meet this standard, a connecting link between the northern termination point of the county bikeway at the junction of the Wisconsin Electric Power Company right-of-way and Seven-Mile Road and the parks along the Lake Michigan shoreline in Milwaukee County should be identified and designated. It is also important to note that adjustments to this existing combined Racine County-City of Racine bike route may be necessary in order to provide connecting links to additional Lake Michigan access sites proposed under this study.

Under the Lake Michigan public access study for Racine County, a standard for the provision of pedestrian paths connecting adjacent parks along the Lake Michigan shoreline was established. Those publicly owned park and open space sites along the Lake Michigan shoreline which are less than 1,000 feet apart are shown on Map 20. As further shown on Map 20, a pedestrian path or informal walkway connects 17th Street Park with Simonsen Park, North Beach with Zoo Park, and Zoo Park with Lakeshore North, thereby meeting the standard for pedestrian connection between these sites. As shown on Map 20, however, there is no connecting pedestrian link between either Lakeshore South and 17th Street Park or between Simonsen Park and Meyers Park. In addition, even though these parks are located adjacent to one another, there are no pedestrian paths or walkways connecting Meyers Park with Pershing Park, or Caledonia Lake Michigan Park with Cliffside Park. Thus, in order to meet this standard, pedestrian paths or walkways should be provided between the aforementioned sites which do not have connecting paths or walkways for pedestrian use.

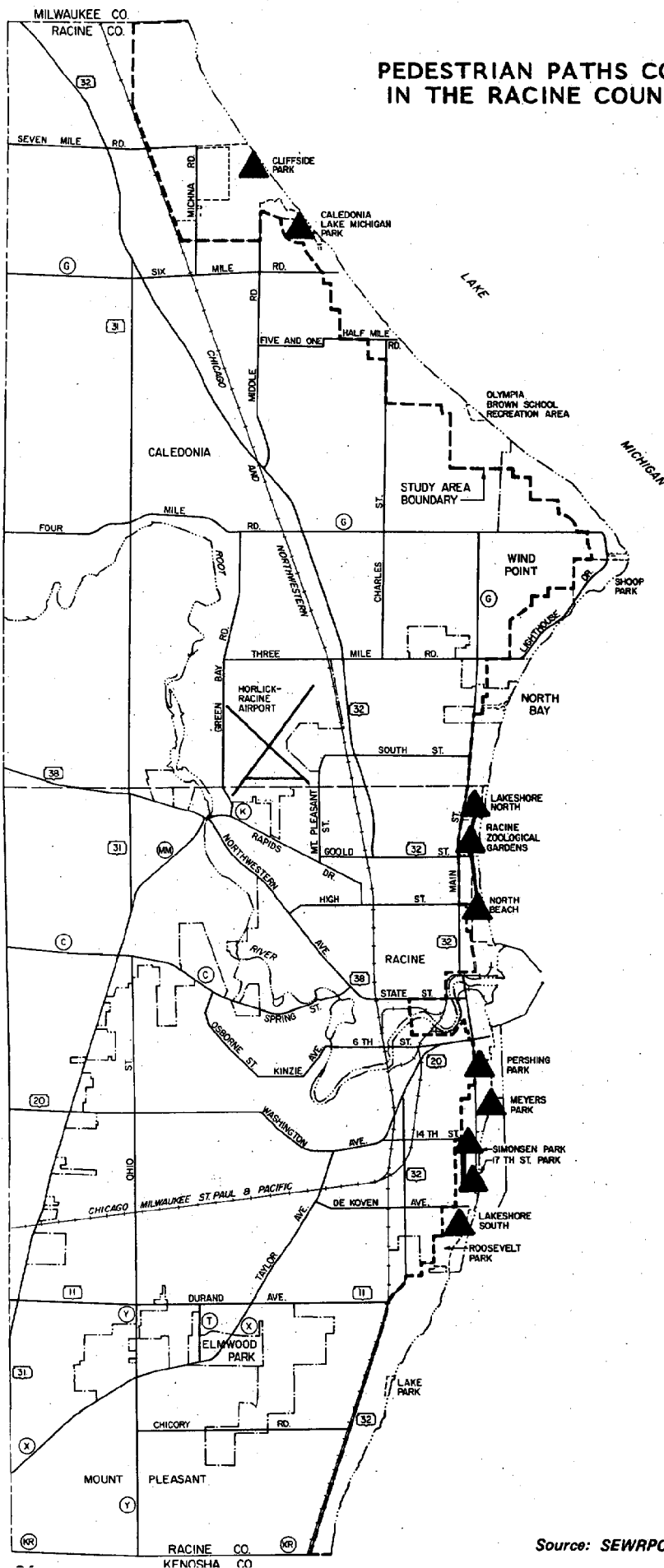
As set forth in Chapter III of this report, a standard calling for the provision of pedestrian paths within park and open space sites having 1,000 or more feet of frontage along the Lake Michigan shoreline was also established by the Advisory Committee. As shown on Map 21, 10 sites within the Lake Michigan public access study area--Lakeshore North, Lakeshore South, North Beach, Pershing Park, 17th Street Park, Simonsen Park, and Zoo Park within the City of Kenosha; Shoop Park in the Village of Wind Point; and Caledonia Lake Michigan Park and Cliffside Park in the Town of Caledonia--have 1,000 or more feet of frontage along the Lake Michigan shoreline. As further shown on Map 21, pedestrian paths or walkways are provided at Lakeshore North, Lakeshore South, North Beach, 17th Street Park, Simonsen Park, and Zoo Park, thereby meeting this standard. As further shown on Map 21, there are no paths or walkways provided in Pershing Park, Shoop Park, Caledonia Lake Michigan Park, and Cliffside Park. Paths or walkways which provide opportunities for access--including only visual access--to the Lake Michigan shoreline should therefore be provided at these sites in order to meet the standard.

## APPLICATION OF URBAN SITE AND FACILITY STANDARDS

Previous sections of this chapter have described the application of standards for resource-oriented sites and facilities developed under both the regional park and open space planning program and the Lake Michigan public access study for Racine County. The application of these standards provided an indication

Map 20

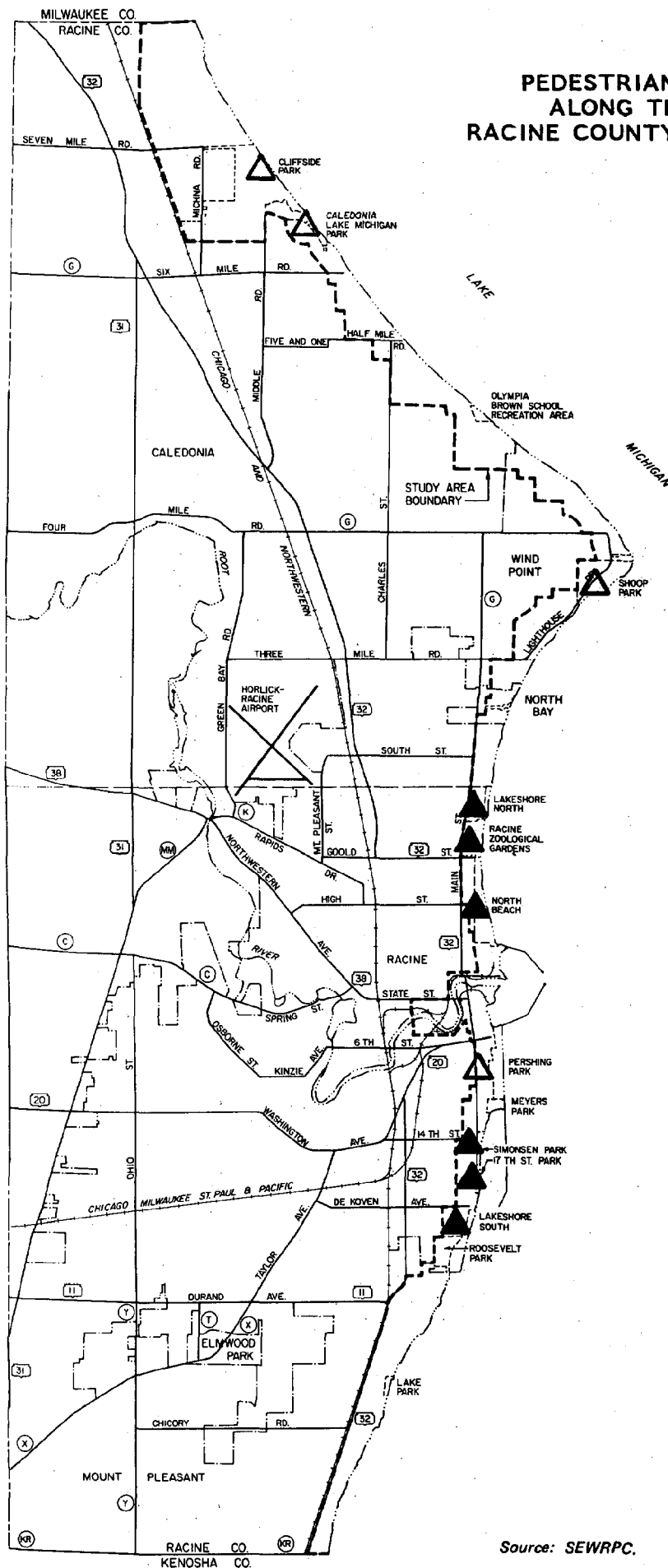
# PEDESTRIAN PATHS CONNECTING ADJACENT PARKS IN THE RACINE COUNTY SHORELAND STUDY AREA



Source: SEWRPC.

Map 21

# PEDESTRIAN PATHS WITHIN PARKS ALONG THE SHORELINE IN THE RACINE COUNTY SHORELAND STUDY AREA



## LEGEND

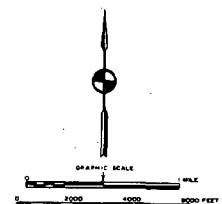


PARK WITH 1,000 OR MORE FEET OF FRONTAGE ON LAKE MICHIGAN HAVING PEDESTRIAN PATHS



PARK WITH 1,000 OR MORE FEET OF FRONTAGE ON LAKE MICHIGAN NOT HAVING PEDESTRIAN PATHS ALONG THE LAKE

Source: SEWRPC.



of the types and location of resource-oriented sites and facilities necessary to enable the use and enjoyment of the natural resource features associated with Lake Michigan and the Lake Michigan shoreline in Racine County. In addition to resource-oriented sites and facilities there may be a need for nonresource-oriented sites and facilities within the Racine shoreland study area. Such sites and facilities typically provide opportunities for activities such as softball, tennis, and playground activities; generally attract users from a small service area; and are provided primarily to meet the outdoor recreation demand of residents in urban areas where such sites and facilities are easily accessible and can be provided economically and efficiently. Since it may be convenient to provide needed nonresource-oriented facilities in proposed additional parks along the Lake Michigan shoreline, a detailed analysis of the need for urban parks and nonresource-oriented facilities in the urban portions of the shoreland study area was conducted through the application of the standards presented in Chapter III of this report. The needs for urban parks and facilities identified in this analysis are summarized below.

#### Urban Sites and Facilities Analysis Area

Before applying urban park and nonresource-oriented facility standards, it was necessary to identify an urban area, including the urban portions of the shoreland study area, for which per capita standards could be rationally applied. It was also necessary to identify all new, urban residential areas likely to exist within and adjacent to the shoreland study area over the plan design period, and to identify the sites and facilities adjacent to the study area which influence the need for urban parks and outdoor recreation facilities.

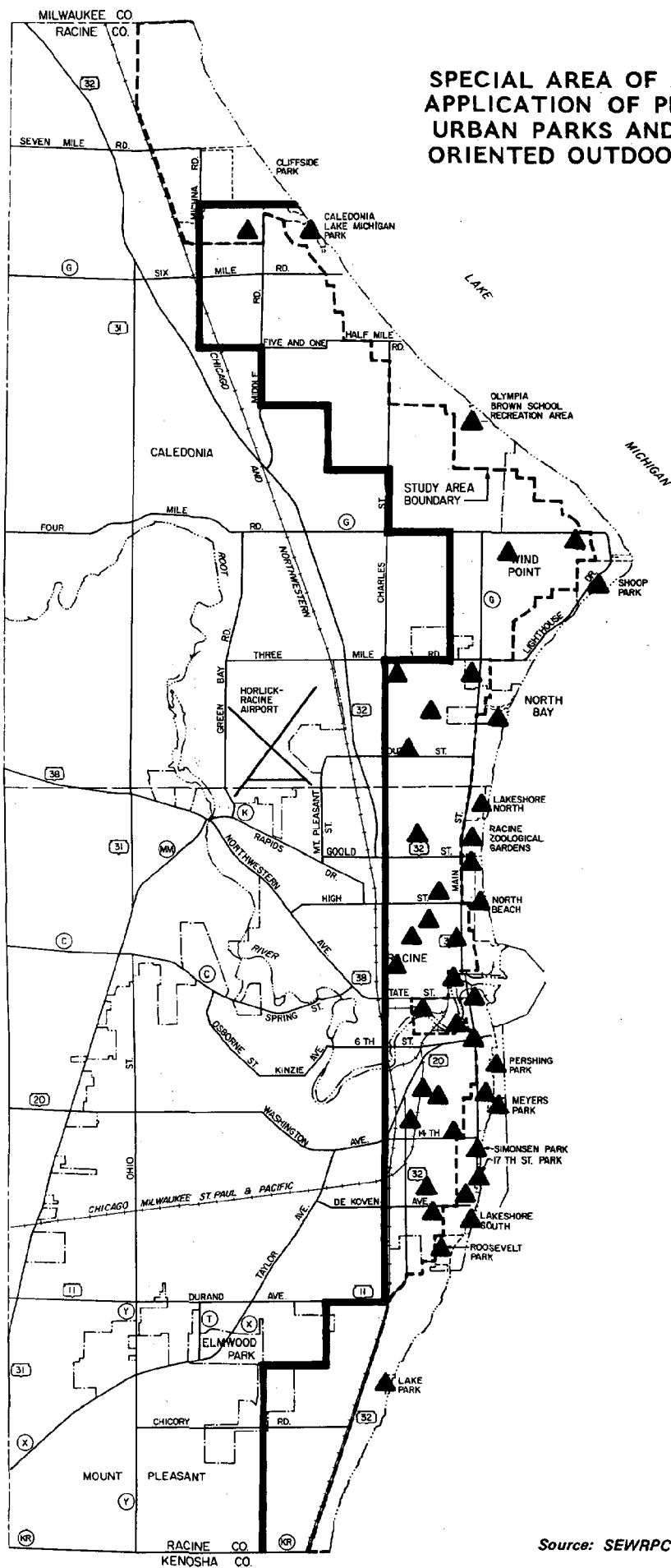
Since the typical service radius of urban parks varies from between one-half mile and one mile according to population densities, a special area of analysis for application of per capita standards was determined by varying the distance from the western edge of the shoreland study area according to the future population density levels recommended in the adopted regional land use plan and in related subregional plans, including the farmland preservation plan for Racine County and the Pike River watershed plan. The geographic extent of the special area of analysis is shown on Map 22, and consists of the urban portions of the shoreland study area and those additional existing and future urban areas adjacent to the study area which influence the need for urban sites and facilities. Existing population estimates for this area were derived from the U. S. Bureau of the Census 1980 population estimates for civil divisions, which include detailed population counts for residential blocks. The total population for this area in 1980 was about 40,800; while the total population of this special area of analysis for the year 2000 is estimated at 43,850, representing an increase of 3,050 persons, or about 7 percent more than the 1980 population level.

#### Application of Standards for Urban Parks



As set forth in Chapter III, standards under Objective No. 1 specify both per capita requirements and accessibility requirements for urban parks and other

Map 22

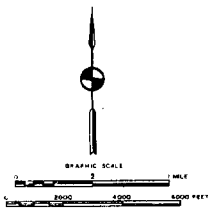
**SPECIAL AREA OF ANALYSIS UTILIZED IN THE  
APPLICATION OF PER CAPITA STANDARDS FOR  
URBAN PARKS AND SELECTED NONRESOURCE-  
ORIENTED OUTDOOR RECREATION FACILITIES**



**LEGEND**

-  SPECIAL AREA OF ANALYSIS
-  GENERAL USE OUTDOOR RECREATION SITE

Source: SEWRPC.



outdoor recreation sites. Urban parks and outdoor recreation sites which provide facilities for intensive, nonresource-oriented outdoor recreation activities have been termed general use outdoor recreation sites. Type III general use sites range in size from 25 to 99 acres, while Type IV general use sites are less than 25 acres in area. There are two basic kinds of public general use sites--park and public school-owned playgrounds and playfields. Although not generally perceived as parks, school-owned outdoor recreation sites provide areas for the pursuit of intensive, nonresource-oriented recreation activities in urban areas. The general use sites located within the special area of analysis are shown on Map 22, and the total combined area of these sites is 335 acres. Since the per capita requirement for urban parks is 6.4 acres per 1,000 persons, application of the per capita standard to the 1980 and plan design year 2000 population of the special area of analysis indicated that a total of 261 acres of parks would be required in 1980, while 281 acres would be required within the special area of analysis by the year 2000. Thus, the per capita acreage requirements for park and public school-owned outdoor recreation sites within the special area of analysis have been met for both the existing urban 1980 population and the planned year 2000 population.

In addition to needs for urban outdoor recreation sites based on an application of per capita acreage standards, a need for additional urban parks may exist if the spatial distribution of existing parks does not provide sufficient access for residents for that urban area. Accordingly, in order to determine which portions of the shoreland study area lack adequate access to urban parks, appropriate service areas were delineated around existing parks for both the existing 1980 urban area and the planned year 2000 urban area, and the existing and planned urban portions of the shoreland study area not adequately served were identified.

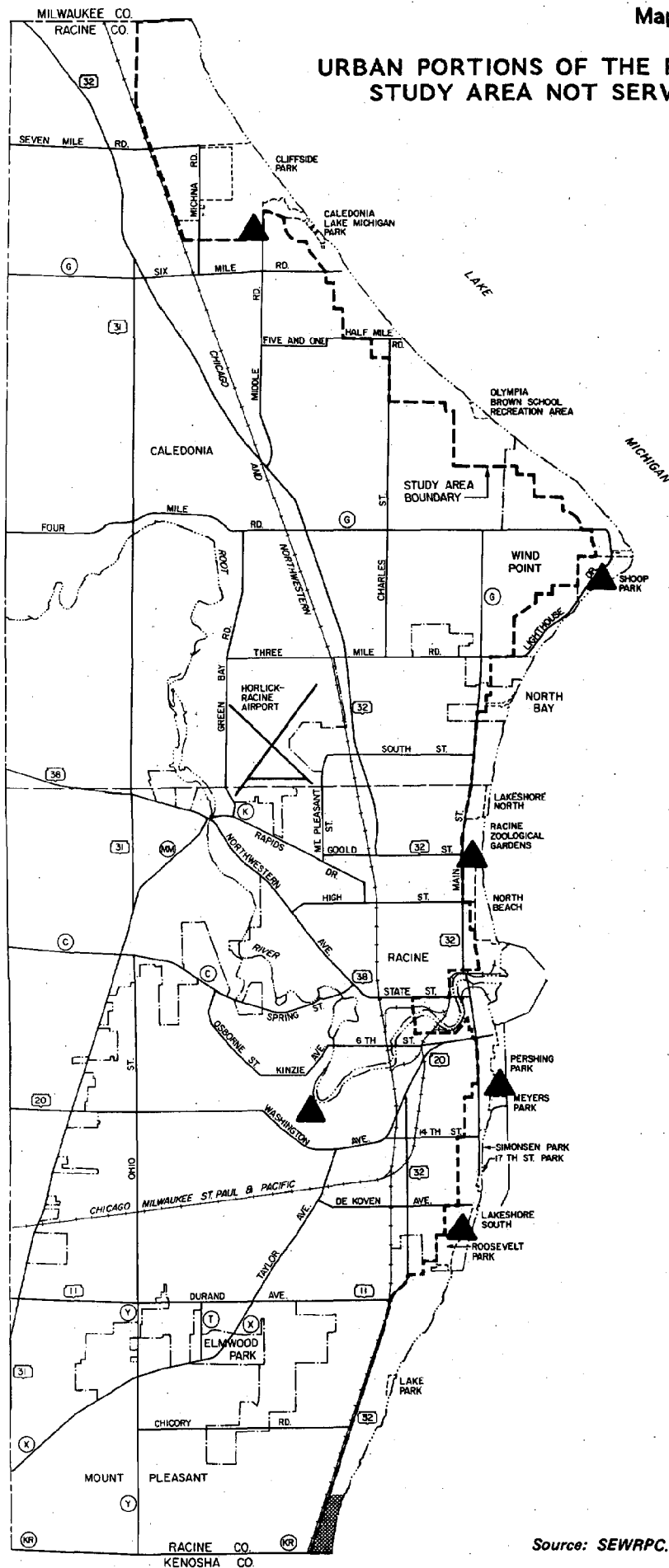
According to standards prescribed under Objective No. 1, as presented in Chapter III, Type III parks--those parks ranging in size from 25 to 99 acres--should be provided within two miles of each resident of urban areas having a population greater than 7,500 persons. Since the service radius of a Type III park is two miles, it was necessary to identify all Type III parks located within two miles of the urban portions of the Racine County shoreland study area. As shown on Map 23, there were six such sites serving the shoreland study area.<sup>3</sup> As further shown on Map 23, only one small area in the southern portion of the Racine County shoreland study area was not adequately served by a Type III park.

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
<sup>3</sup>For purposes of the Type III park accessibility analysis, the following parks within and adjacent to the Racine County shoreland study area were classified as Type III parks: Shoop Park; the combination of four adjacent parks, Lakeshore North, Zoo Park, Lakeview Park, and North Beach; the combination of two parks, Pershing Park and Meyers Park; the combination of two additional parks, Lakeshore South and Roosevelt Park; and Washington Park. It should be noted that the need for a Type III park is also met by a Type II or a Type I park; thus the accessibility analysis for Type III parks included the aforementioned five Type III parks as well as Cliffside Park, a Type I park. It should also be noted that there were no Type III parks located outside Racine County which were located within two miles of the urban portions of the Racine County shoreland study area.

Map 23

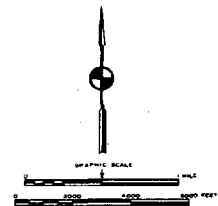
# URBAN PORTIONS OF THE RACINE COUNTY SHORELAND STUDY AREA NOT SERVED BY A TYPE III PARK



## LEGEND

-  EXISTING TYPE III PARK
-  AREA NOT SERVED BY A TYPE III PARK

Source: SEWRPC.



According to the standard prescribed under Objective No. 1, as presented in Chapter III, the service radius for Type IV parks varies with population density. In this regard, the service radius of a Type IV park is 0.5 mile in high-density urban areas, 0.75 mile in a medium-density urban area, and 1.0 mile in a low-density urban area. Within the urbanized portions of Racine County shoreland study area, a combination of all three urban densities exist and therefore it was necessary to vary the service radius according to the existing and planned urban population densities. As shown on Map 24, there were 12 parks located within or adjacent to the urban portion of the Racine County shoreland study area.<sup>4</sup> As further shown on Map 24, there were two areas in the Racine County shoreland study area which were not served by Type IV parks: a portion of the study area approximately 1.5 miles in length located between Cliffside Park and Shoop Park in the Town of Caledonia, and a small area located in the southernmost portion of the study area.

### Urban Outdoor Recreation Facility Needs

As set forth in Chapter III, standards under Objective No. 2 specify the per capita and accessibility requirements for selected intensive, nonresource-oriented outdoor recreation facilities, including playfields, playgrounds, softball diamonds, and tennis courts. These facilities attract users from relatively short distances and, being located primarily in Type III and Type IV general use outdoor recreation sites in urban areas, serve residents of those urban areas. The analysis of per capita needs for selected intensive nonresource-oriented facilities in the special area of analysis and the accessibility needs in the urban portion of the Racine County shoreland study area are presented below.

The standards under Objective No. 2 for selected intensive, nonresource-oriented outdoor recreation facilities were applied to both the existing 1980 and the planned year 2000 population for the special area of analysis. As indicated in Table 12, the existing quantity of facilities for intensive, nonresource-oriented outdoor recreation activities in the special area of analysis exceeded the minimum standard requirement for playgrounds in both 1980 and the plan design year 2000. However, application of the standard requirement for the remaining three selected intensive facilities indicates a need for additional playfields, softball diamonds, and tennis courts in both 1980 and the plan design year 2000. As shown in Table 12, by the year 2000,

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<sup>4</sup>For purposes of the Type IV park accessibility analysis, the following parks, including those Type I, Type II, or Type III parks which are located within the appropriate service district of the urban portions of the Racine County shoreland study area, were included in the Type IV park accessibility analysis: Cliffside Park; Caledonia Lake Michigan Park; Village Green Park; Shoop Park; the unnamed site in the Village of North Bay; Carlson Park; a combination of Lakeshore North, Zoo Park, Lakeview Park, and North Beach; Colonial Park; the combination of Pershing Park and Meyers Park; the combination of Lakeshore South and Roosevelt Park; Case-Harmon Field; and Lake Park. It should also be noted that there were no Type IV parks located outside Racine County which were located within the appropriate service district of the Racine County Lake Michigan shoreland study area.



Map 24

# URBAN PORTIONS OF THE RACINE COUNTY SHORELAND STUDY AREA NOT SERVED BY A TYPE IV PARK

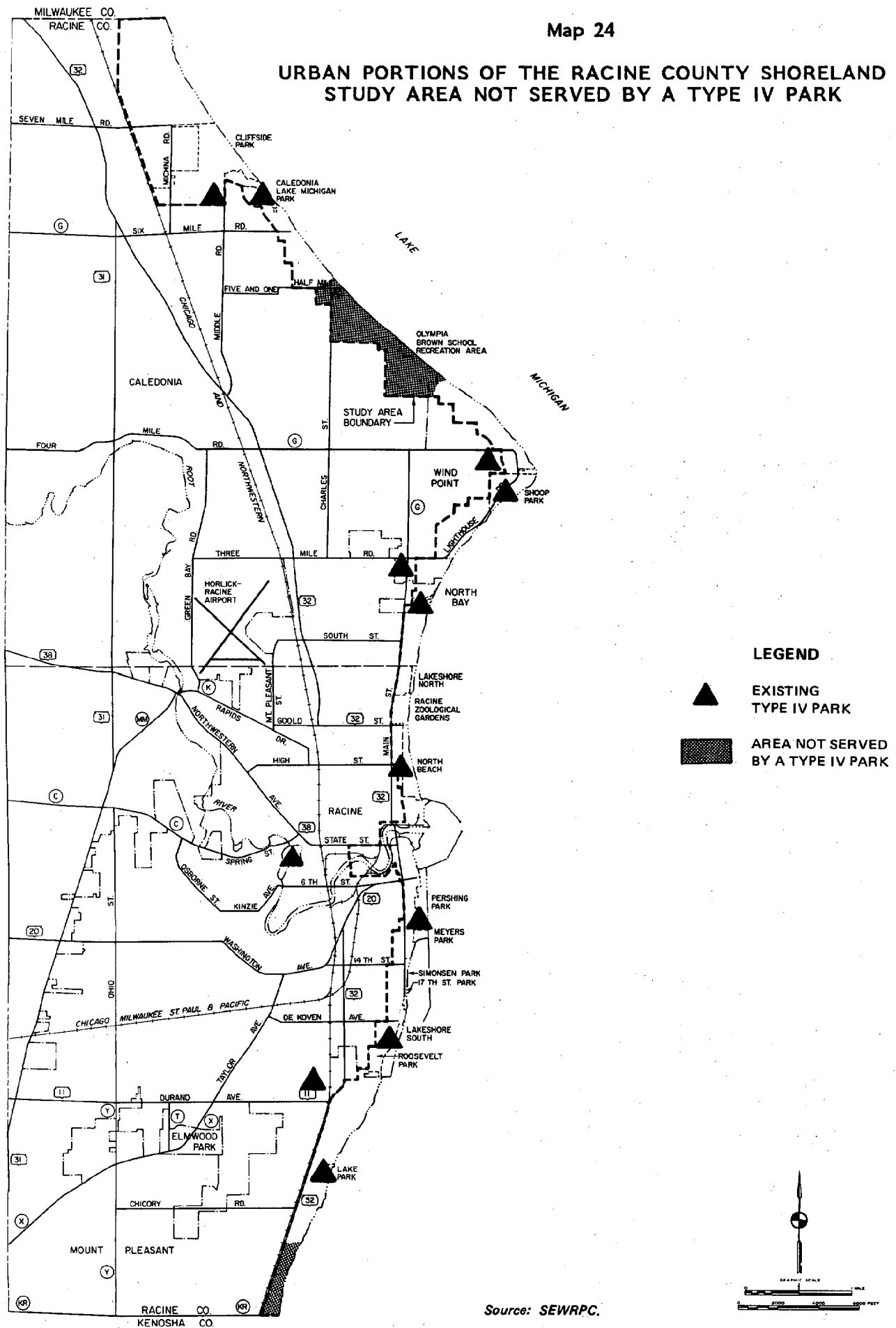


Table 12

**PER CAPITA REQUIREMENTS FOR SELECTED INTENSIVE  
NONRESOURCE-ORIENTED OUTDOOR RECREATION FACILITIES  
IN THE SPECIAL AREA OF ANALYSIS: 1980 AND 2000**

Facility	Existing Quantity of Facility <sup>a</sup>	Minimum Standard Requirement <sup>b</sup> (facility per 100 persons)	1980 (existing urban population--40,802)		2000 (planned urban population--43,848)	
			Facility Requirement <sup>c</sup>	Facility Need <sup>d</sup>	Facility Requirement <sup>c</sup>	Facility Need <sup>d</sup>
Playfield.....	11	0.50	20.4	9	21.9	11
Playground.....	22	0.42	17.1	--	18.4	--
Softball Diamond....	9	0.60	24.5	16	26.3	17
Tennis Court.....	17	0.60	24.5	8	26.3	9

<sup>a</sup>This total includes only facilities at sites within the special area of analysis.

<sup>b</sup>Standard per capita facility requirements are set forth under Objective No. 2 in Chapter III.

<sup>c</sup>The facility requirement was determined by multiplying the minimum standard requirement times the appropriate population in thousands of persons.

<sup>d</sup>Facility need was determined by subtracting the existing quantity of facility from the facility requirement and rounding the remainder to the nearest integer. If the remainder was a negative number, the minimum facility requirement was exceeded, and no per capita facility need was identified.

Source: SEWRPC.

it is anticipated that 11 additional playfields, 17 softball diamonds, and 9 tennis courts would be required to meet the needs for such facilities in the special area of analysis.

As in the case of the application of standards for Type III and Type IV park sites, it is important to recognize that, in addition to per capita facility requirements, urban areas may also have a need for additional facilities because the spatial distribution of such facilities does not provide sufficient access for residents of that area. Accordingly, in order to determine which urban portions of the Racine County shoreland study area lack adequate access to certain intensive, nonresource-oriented, outdoor recreation facilities, appropriate service areas<sup>5</sup> were delineated for these facilities, and those areas not served were identified.

As indicated on Map 25, there were 20 playfields located within one-half mile of the urban portions of the shoreland study area. Since the prescribed service distance of playfields is one-half mile, application of the accessibility requirement for playfields indicates that large portions of the Racine County shoreland study area are not served by playfields. As shown on Map 25, those areas not served by the existing distribution of playfields are located throughout the urban portions of the shoreland study area.

As shown on Map 26, playgrounds were located at 29 general use, outdoor recreation sites within one-half mile of the urban portion of the shoreland study area. As further shown on Map 26, application of the prescribed one-half-mile service distance for playgrounds indicates that there were five areas within the shoreland study area not served by the existing distribution of playgrounds. As shown on Map 27, softball diamonds were located at 20 general use, outdoor recreation sites within one mile of the shoreland study area, and as further shown on Map 27, application of the prescribed one-mile service distance for softball diamonds indicates that there was one large portion of the shoreland study area not served by a softball diamond facility. As shown on Map 28, tennis courts were located at 13 general use, outdoor recreation sites within one mile of the shoreland study area, and as further shown on Map 28, application of the prescribed one-mile service distance for tennis courts indicates that there were two areas within the shoreland study area not served by tennis courts.

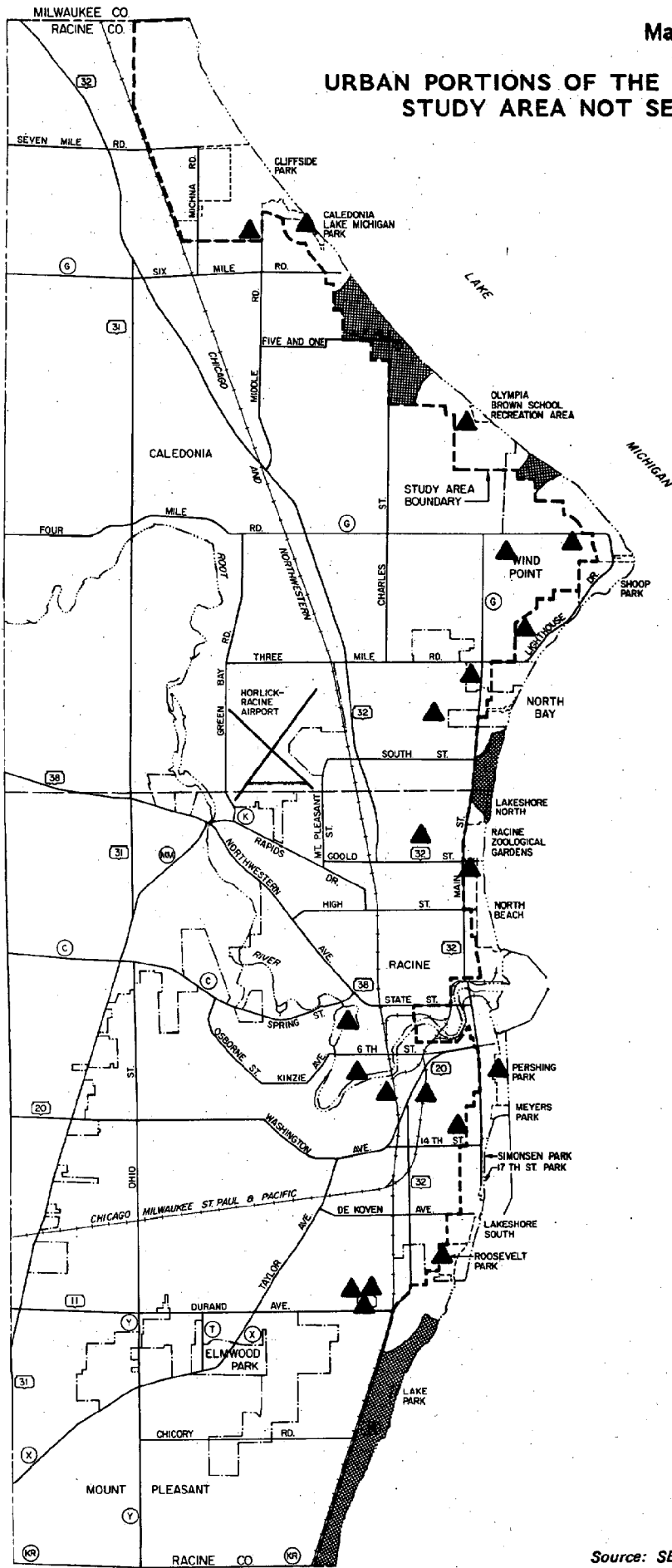
#### ADDITIONAL LAKE MICHIGAN ACCESS REQUIREMENTS

The preceding sections of this chapter have identified requirements for additional Lake Michigan access and other outdoor recreation facilities based on

<sup>5</sup>The service radius prescribed in the standards under Objective No. 2 indicates the maximum distance a participant should have to travel from his or her place of residence to participate in a given outdoor recreation activity. It is important to note that, for intensive, nonresource-oriented facilities, this accessibility requirement is intended to be applied only within existing and planned urban service areas. It is also important to note that, as in the case of the accessibility analyses for Type III and Type IV parks, facilities located outside, but adjacent to, the urban portion of the study area, may serve the residents of that area. Such facilities have been identified in the accessibility need analyses for the playfields, playgrounds, softball diamonds, and tennis courts.

Map 25

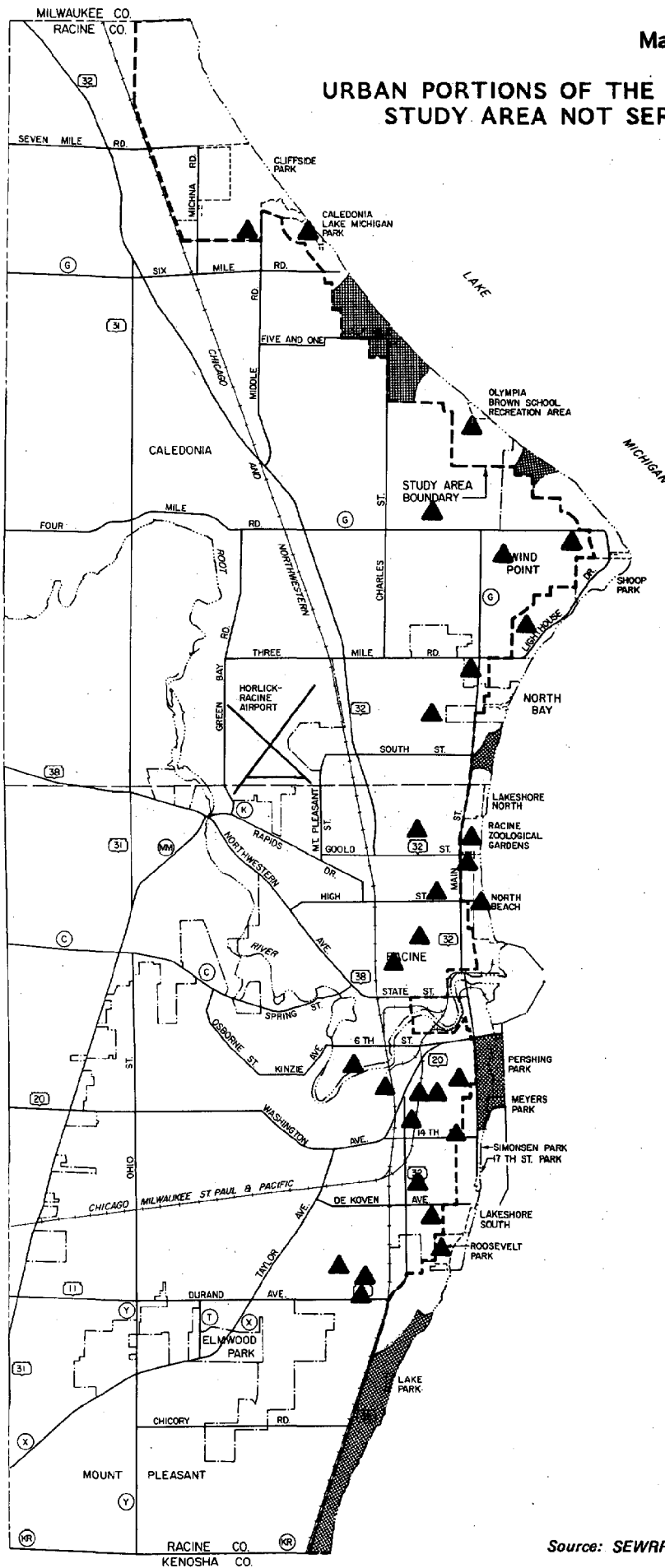
# URBAN PORTIONS OF THE RACINE COUNTY SHORELAND STUDY AREA NOT SERVED BY A PLAYFIELD



Source: SEWRPC.

Map 26

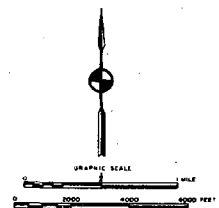
# URBAN PORTIONS OF THE RACINE COUNTY SHORELAND STUDY AREA NOT SERVED BY A PLAYGROUND



## LEGEND

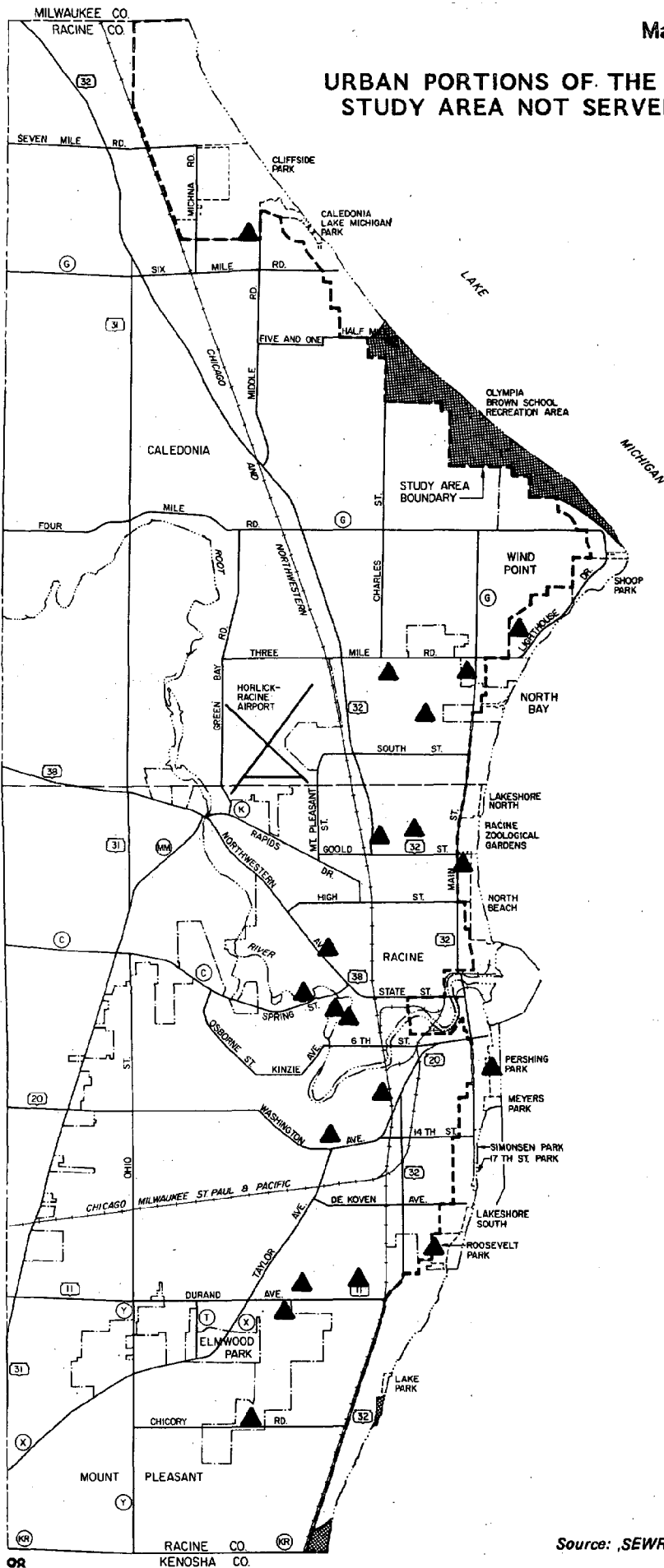
- ▲ EXISTING PLAYGROUND
- ▨ AREA NOT SERVED BY A PLAYGROUND

Source: SEWRPC.



Map 27

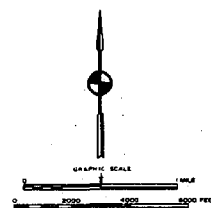
# URBAN PORTIONS OF THE RACINE COUNTY SHORELAND STUDY AREA NOT SERVED BY A SOFTBALL DIAMOND



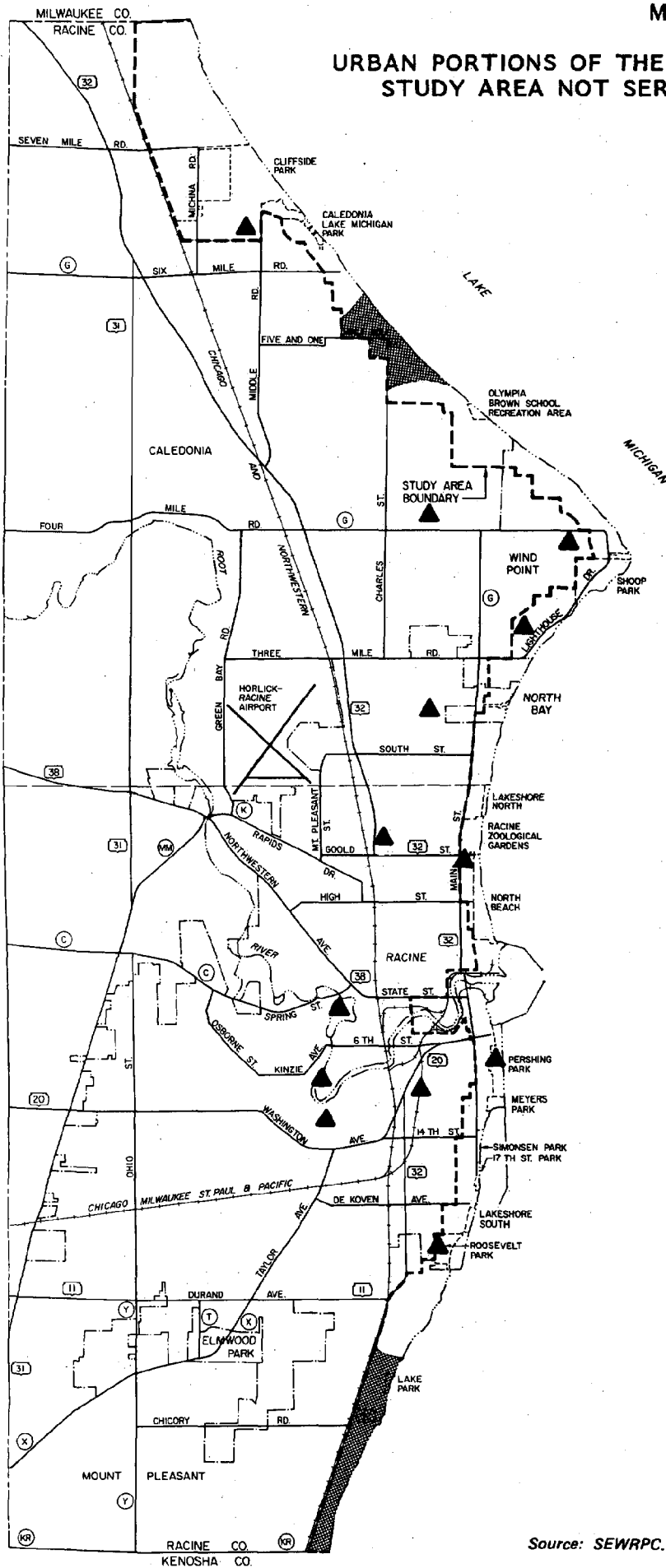
## LEGEND

- ▲ EXISTING SOFTBALL DIAMOND
- AREA NOT SERVED BY A SOFTBALL DIAMOND

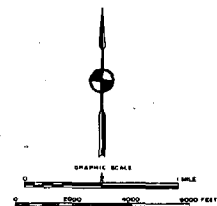
Source: SEWRPC.



# URBAN PORTIONS OF THE RACINE COUNTY SHORELAND STUDY AREA NOT SERVED BY A TENNIS COURT



Source: SEWRPC.



an application of the standards developed under the Lake Michigan access study. In addition, other Lake Michigan access needs have been identified by members of the Racine County Lake Michigan Public Access Study Technical Advisory Committee and by representatives of the various units and agencies of government located within the shoreland study area. Specifically, the Advisory Committee noted that, while the primary purpose of this study is the development of a plan to attain the objectives and standards for certain resource-oriented activities related to Lake Michigan, it is important to consider the need for facilities for winter outdoor recreation activities in the study area. The consideration of need for such facilities as sledding and skiing is especially important in view of the possibility that large amounts of fill for the construction of hills may be available if bluffs along the Lake Michigan shoreline are stabilized. The Committee also noted that there is a need to provide an opportunity for the general public to obtain information concerning the natural resource features associated with the Lake Michigan shoreline in Racine County and indicated that a nature center and related facilities should be provided within the study area. In addition, the Committee noted that the need for tennis facilities identified in the previous section of this chapter exists primarily in the northern portion of the City of Racine, within and adjacent to the study area, and in the urban portions of the study area located in the Towns of Caledonia and Mt. Pleasant. Finally, the Committee noted that means other than fee simple acquisition, such as scenic easements, should be considered to secure public access to the lake in addition to those access needs identified through the application of objectives and standards.

In addition to the needs relating to the provision of outdoor recreation and access facilities in the Racine County Lake Michigan shoreland study area, the objectives and standards include equally important needs to preserve and protect natural resource base features within the study area. It is important to note that the need to preserve and protect the natural resources within the study area is independent of population levels and distribution, and these objectives and standards can be basically achieved through the preservation in natural, open uses of all existing resource features in the study area. A description of these natural resource features has been presented in Chapter II of this report, while the means for preserving such lands are considered in the following chapter.



## Chapter V

### RECOMMENDED PLAN

#### INTRODUCTION

The primary purpose of the Lake Michigan public access study is the development of a plan to guide Racine County, and the concerned units and agencies of government within Racine County, in the maintenance of existing, and in the acquisition and development of new, sites and facilities providing public recreational access to Lake Michigan and the Lake Michigan shoreline. The objectives, principles, and standards presented in Chapter III of this report provide the primary basis for the formulation and evaluation of that plan. Certain of these agreed-upon objectives are classified as resource-oriented inasmuch as they pertain to activities which depend on natural resource amenities for their very existence, or to activities for which the quality of the recreational experience is significantly enhanced by the presence of natural resource amenities. Resource-oriented activities within the shoreland area include swimming, beach activities, boating, camping, passive recreation, and trail or route activities such as bicycling, hiking, and pleasure driving. The primary concern of the Lake Michigan public access study is the attainment of the objectives pertaining to these resource-oriented activities.

This chapter presents the recommended plan for the Racine County Lake Michigan shoreland study area. The first section of this chapter presents a summary of the need for resource-oriented outdoor recreation sites and facilities in the study area. The second section presents a description of the recommended plan, including recommendations for the acquisition of additional land and the development of additional facilities at Cliffside Park and Caledonia Lake Michigan Park, a summary of the recommendations developed under the study of the Lake Michigan waterfront parks undertaken by a private consultant for the City of Racine, and the recommendations for the acquisition and development of additional outdoor recreation and public access sites within the shoreland study area. In addition, the second section presents the recommendations for the designation and development of outdoor recreation trails and routes within and adjacent to the study area and the preservation of the primary environmental corridors in the study area. The third section of this chapter describes the degree to which the agreed-upon objectives are met under the recommended plan, and the final section of this chapter outlines the steps required to implement the recommended plan.

#### THE NEEDS FOR RESOURCE-ORIENTED OUTDOOR RECREATION SITES AND FACILITIES

In Chapter IV of this report, the needs for resource-oriented outdoor recreation sites and facilities in the Racine County Lake Michigan shoreland study area were identified through the application of standards formulated by the technical advisory committee. The recommended plan presented in this chapter addresses these identified needs. A summary of the needs for additional shoreland park and open space sites and facilities is presented in Table 13. A graphic summary of the areas in the shoreland study area lacking certain outdoor recreation sites and facilities is shown on Map 29.

Table 13

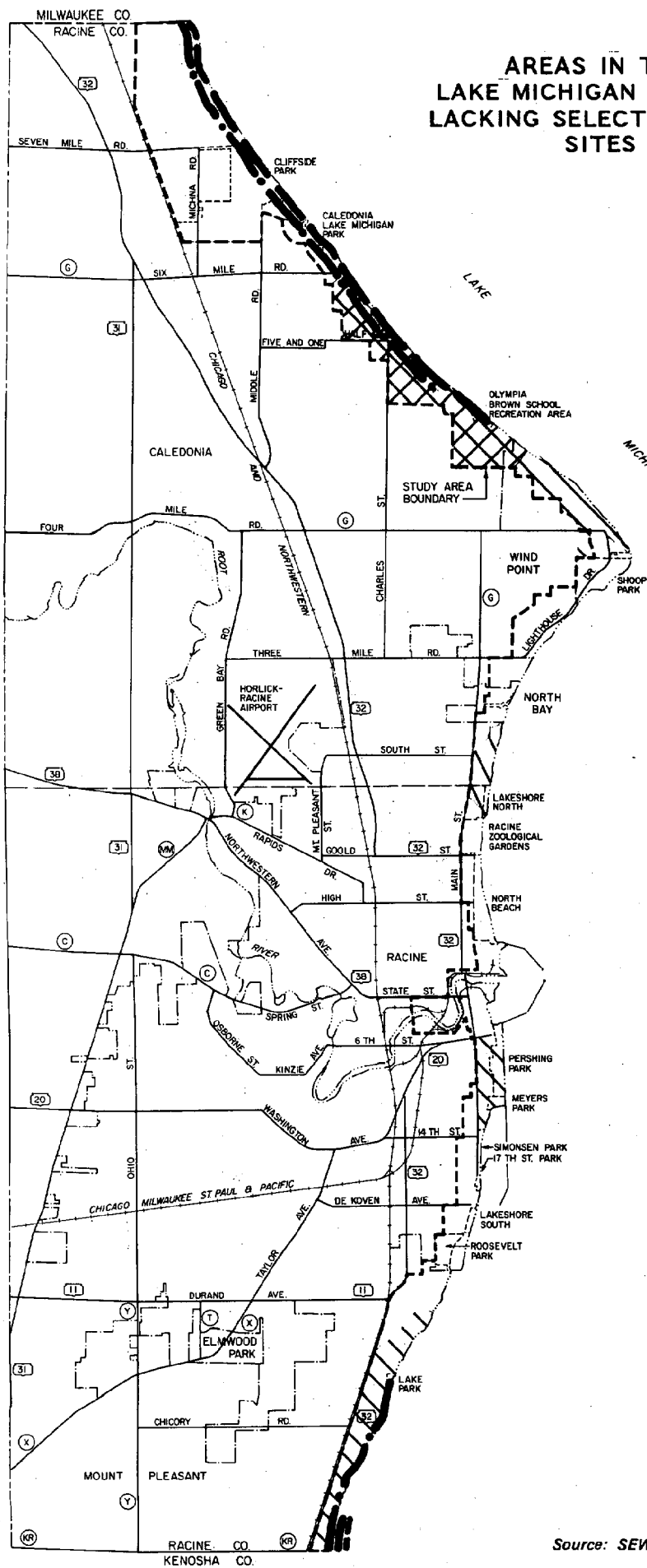
**ADDITIONAL PUBLIC ACCESS, OUTDOOR RECREATION, AND OPEN  
SPACE SITES AND FACILITIES REQUIRED IN THE RACINE  
COUNTY LAKE MICHIGAN SHORELAND STUDY AREA**

Site or Facility	Additional Site or Facility Requirement
Resource-Oriented Park and Open Space Sites Major Park.....  Sites with Lake Michigan Frontage....	Provision of additional land at Cliff- side Park Provision of an additional 0.82 linear mile of frontage
Facilities for Intensive Resource-Oriented Activities Swimming.....  Beach Activity.....  Boating.....  Passive Recreation.....  Camping..... Nature Study.....	Provision of a swimming beach in two reaches of the shoreline lacking swim- ming facilities (see Map 29) Provision of a beach in two reaches of the shoreline lacking beach facilities (see Map 29) Provision of additional slips and launch ramps in the Racine harbor and provi- sion of a harbor of refuge, launch ramps, and slips in one reach of shore- line lacking such facilities Provision of opportunities for passive recreation in one reach of the shore- line lacking such opportunities (see Map 29) No additional facility requirement Provision of a nature center at Cliff- side Park
Trails and Routes Pleasure Drive.....  Scenic Drive.....  Bike Route..... Hiking Path.....	Provision of designated route within and adjacent to the study area Provision of a continuous 2.5-mile drive with an unobstructed view of Lake Michigan No additional facility requirement Provision of a pedestrian path within four parks
Urban Park and Open Space Sites and Facilities Urban Parks.....  Nonresource-Oriented Facilities.....	Provision of parks to serve two areas within the urban portions of the study area (see Map 29) Provision of selected facilities to serve four areas within the urban por- tions of the study area (see Map 29)
Natural Resource Features Primary Environmental Corridors.....	Preservation of the remaining undevel- oped lands within the primary environ- mental corridor in natural open space uses






Source: SEWRPC.

As indicated in Table 13, an additional 0.82 linear mile of Lake Michigan shoreline should be acquired for park and open space purposes in the shoreland study area. In addition, it may be necessary to acquire additional land adjacent to Cliffside Park in order to provide sufficient area for the development

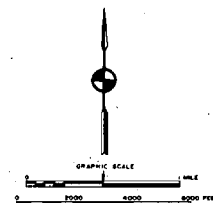
# AREAS IN THE RACINE COUNTY LAKE MICHIGAN SHORELAND STUDY AREA LACKING SELECTED OUTDOOR RECREATION SITES AND FACILITIES



## LEGEND

-  SHORELINE REACH LACKING AN AREA FOR SWIMMING
-  SHORELINE REACH LACKING AN AREA FOR BEACH ACTIVITY
-  SHORELINE REACH LACKING AN AREA FOR PASSIVE RECREATION
-  AREA NOT ADEQUATELY SERVED BY URBAN PARKS
-  AREA NOT ADEQUATELY SERVED BY NONRESOURCE-ORIENTED RECREATIONAL FACILITIES

Source: SEWRPC.



of additional needed resource-oriented outdoor recreation facilities. As further indicated in Table 13, and shown on Map 29, certain reaches of the Lake Michigan shoreline in Racine County lack areas providing opportunities for swimming, beach activity, and passive recreation. In addition, portions of the study area are not adequately served by urban parks and nonresource-oriented outdoor recreation facilities. It is important to note that, because such sites do not depend on the resources associated with Lake Michigan and the Lake Michigan shoreline, it may not be necessary to provide such urban parks and nonresource-oriented facilities within the study area. However, such sites and facilities should then be provided adjacent to the study area. In addition, as indicated in Table 13, a designated pleasure driving route, a scenic drive, and pedestrian paths should be provided within or adjacent to the shoreland study area. Finally, the remaining undeveloped lands located within the primary environmental corridors should be preserved in natural open space uses.

## RECOMMENDED PLAN

As already noted, the recommended public access plan in the Racine County Lake Michigan shoreland study area addresses the need for resource-oriented outdoor recreation sites and facilities. In addition, the plan addresses the need for urban parks and intensive nonresource-oriented facilities in the study area, as well as other park and open space-related needs, including open space preservation needs. For purposes of presentation, the plan has been divided into five elements. The first element of the plan deals with Cliffside Park, specifically the manner in which Cliffside Park serves as a major regional resource-oriented outdoor recreation site, providing a variety of opportunities for lake-enhanced activities such as camping, picnicking, nature study, and trail activities. This element includes recommendations for the maintenance of existing facilities at Cliffside Park, the acquisition of additional land adjacent to Cliffside Park and Caledonia Lake Michigan Park, the development of additional facilities within these parks, and the coordination of the development of outdoor recreation facilities in Cliffside Park with the development of facilities in Caledonia Lake Michigan Park.

The second element of the plan deals with the City of Racine waterfront parks, specifically the manner in which such parks serve as a center for the provision of opportunities for participation in a variety of water-dependent outdoor recreation activities in an urban setting. This element includes recommendations for the upgrading of the existing facilities provided at the Racine waterfront parks, the development of additional launch ramp lanes and other boating facilities, the development of a water-related activity area, and the development of a special lakefront activity area at Pershing Park.

The third element of the plan deals with the maintenance of existing, and the provision of additional, small parks along the Racine County Lake Michigan shoreline. This element includes recommendations for the maintenance of existing facilities at the Olympia Brown School recreation area, the maintenance of existing facilities and provision of additional facilities at Shoop Park, the maintenance of existing facilities at the Village of North Bay Park site, the acquisition and development of an additional site in the City of Racine, the development of additional facilities at Lake Park in the Town of Mt. Pleasant, and the acquisition and development of an additional site in the Town of Mt. Pleasant.

The fourth element of the plan deals with the provision of a variety of trail and route facilities within and adjacent to the study area. This element includes recommendations for the provision of a designated pleasure driving route, the provision of a scenic drive, the maintenance of existing bike trails and routes within and adjacent to the study area, and the provision of additional hiking and pedestrian paths within and between outdoor recreation and open space sites within the study area.

The fifth and final element of the plan deals with the preservation of natural resource features within the shoreland study area, including in particular the natural resource features located within the primary environmental corridor. Collectively these five plan elements address all of the identified public access, outdoor recreation, and open space preservation needs identified in Chapter IV of this report. A graphic summary of the general recommendations of the major elements is shown on Map 30, while a detailed description of each element is presented below.

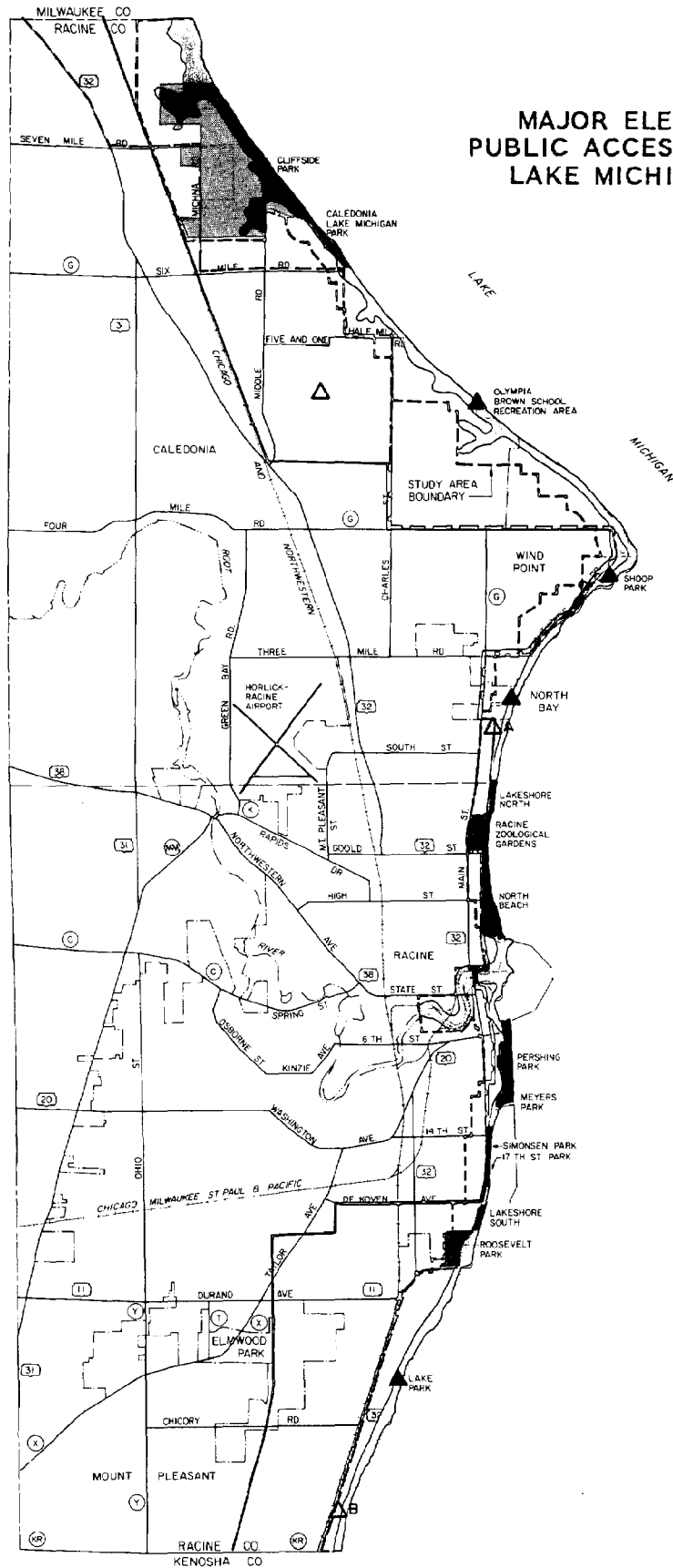
#### Cliffside Park and Caledonia Lake Michigan Park

Cliffside Park is a 214-acre park site located north of the Crestview subdivision and east of Michna Road along the shore of Lake Michigan in the northern portion of the Racine County Lake Michigan shoreland study area. The park is the largest individual site in the study area and has been identified as a regional park, that is, as a recreational site of areawide importance, in the Commission's adopted regional park and open space plan. Only the southern portion of the site is presently developed, with ball diamonds, a small picnic area, tennis courts, and other playfield and playground facilities located adjacent to the Crestview subdivision. These facilities, providing opportunities for intensive, nonresource-oriented outdoor recreation activity, encompass about 40 acres of the site. In addition, in 1981, a 40-acre, 92-campsite campground located west of a large ravine and north of the intensive use area was opened for family and limited group camping. The remainder of the site, including the ravine, the northern half of the site, and the Lake Michigan shoreline, is currently undeveloped.

Regional parks generally should provide a variety of facilities for resource-oriented outdoor recreation activities; and so that passive outdoor recreation activities such as picnicking and camping and extensive trail-oriented activities such as nature study and hiking can be accommodated in a rural, open space atmosphere, it is recommended that such regional parks be 250 acres or larger in size. At Cliffside Park, approximately 40 acres have been developed for intensive, nonresource-oriented outdoor recreation facilities and an additional 15 acres in the extreme southwest corner of the site are utilized for park maintenance. Thus, only about 160 acres are available for use for resource-oriented outdoor recreation activities. The site area usable for resource-oriented activities is also limited by the height of the bluffs along the Lake Michigan shoreline, which can provide hazards for outdoor recreation activity near the bluff edge. Finally, the site area usable for outdoor recreation activities has been, and continues to be, reduced by recession of the Lake Michigan shoreline. As already noted, application of recent recession rates indicates that by the year 2000 up to 15 acres of parkland may be lost to Lake Michigan erosion. Therefore, in order to provide adequate lands for a variety of outdoor recreation and open space facilities, it is recommended

Map 30

# MAJOR ELEMENTS OF THE RECOMMENDED PUBLIC ACCESS PLAN FOR THE RACINE COUNTY LAKE MICHIGAN SHORELAND STUDY AREA



Source: SEWRPC.

that Cliffside Park be expanded through the acquisition of 315 acres of undeveloped, open space land located north and west of the existing park boundaries (see Map 31). The acquisition of such lands north of Cliffside Park would also result in the addition of 3,000 linear feet of Lake Michigan shoreline and a large area of open space land to accommodate resource-oriented activities. It should also be noted that the National Guard target range site is located adjacent to the additional lands proposed for acquisition, and if the National Guard site becomes available for alternative uses, the site should also be considered for public park and open space uses.

As previously noted, Cliffside Park is located at the edge of the developed urban portion of the study area. Agricultural lands and other rural, open space lands are located to the west and north of the site, and this generally rural, open space environment is particularly well suited to the provision of opportunities for extensive resource-oriented facilities. In addition, while direct access to the shoreline is not possible due to the height of the bluffs, Lake Michigan and the Lake Michigan shoreline provide additional natural resource amenities which can enhance participation in a variety of outdoor recreation activities. Therefore, it is recommended that Cliffside Park be developed for a variety of trail-oriented facilities, thereby utilizing the amenities provided by Lake Michigan and its shoreline and the open space provided by the existing and proposed additional lands within the park site. Under this proposal, hiking, biking, ski touring, and other recreational trails would be provided and the park would serve as a terminus for the County snowmobile trail. In addition, nature study trails along with a nature center and support facilities would be developed. It is also envisioned that opportunities for picnicking would also be provided within the park. It is important to note that the provision of these facilities, along with the maintenance of the existing campground, is generally consistent with a development proposal set forth in the plan for Cliffside Park and environs--completed by Owen Ayres & Associates, Inc., for Racine County in 1979.<sup>1</sup> In addition to the picnic areas and related facilities, the nature center, and the trail facilities, the development plan prepared by the consultant also recommends the provision of a winter sports activity area and a boat launch area.

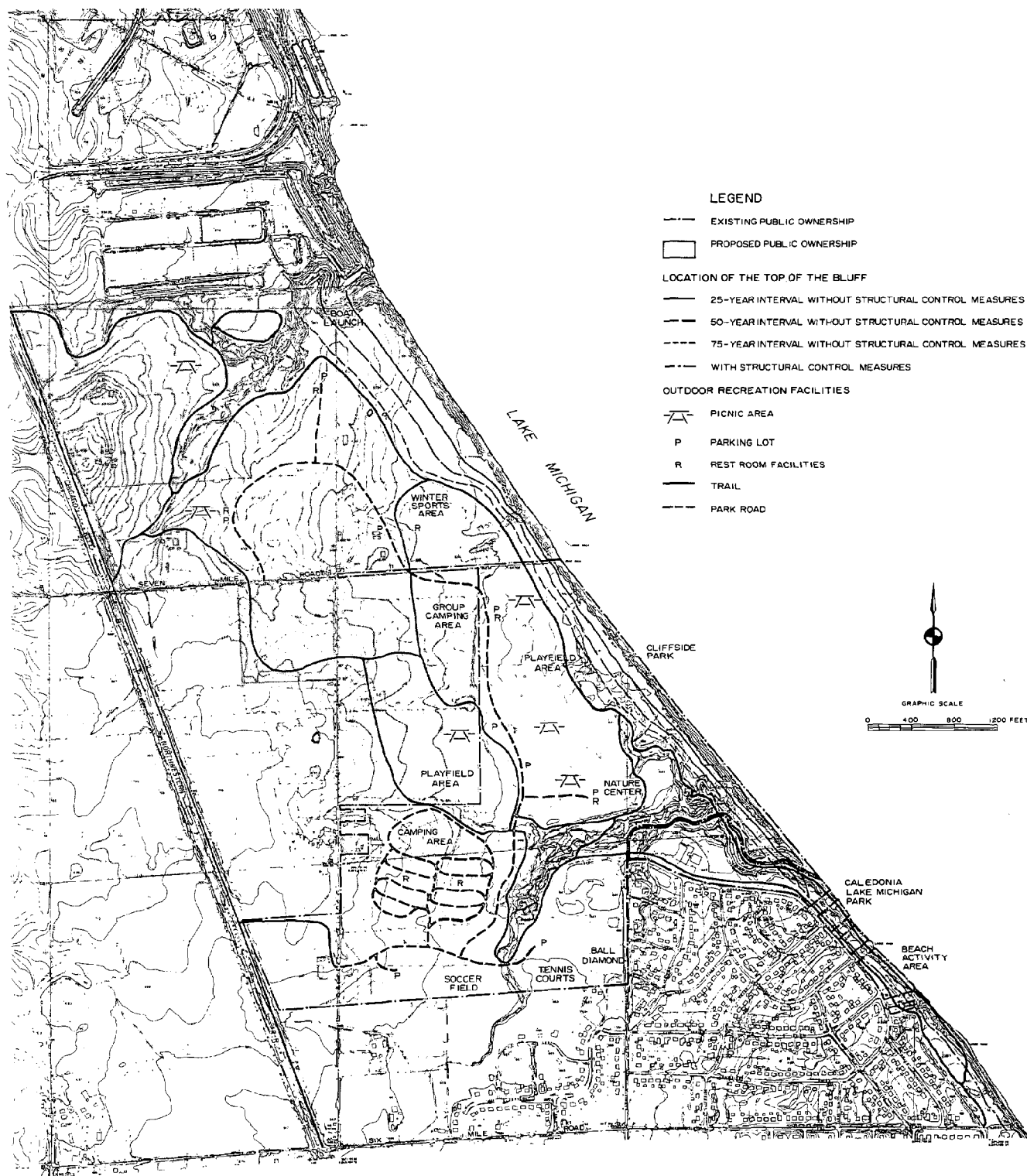
The provision of a winter sports area, including the provision of opportunities for such activities as sledding, tobogganing, and downhill skiing, would be possible even though topographical characteristics necessary for such facilities do not presently exist at the site. As noted in Chapter II of this report, the highest recession rate along the Racine County Lake Michigan shoreline is located within and adjacent to the Cliffside Park shoreline. Recognizing the serious nature of this erosion hazard to the Crestview subdivision--including Lakeshore Drive, associated utility lines, and ultimately residences within the Crestview subdivision--the Town of Caledonia has proposed to undertake efforts to stabilize the shoreline. These efforts would include the creation of a stable slope along the high bluffs east of the Crestview subdivision and would result in the taking of large amounts of fill from the base of the bluff to create this stable slope. Additional fill material for the development of a winter sports area would also be available if the boat launch area proposed to be located in the ravine south of the

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<sup>1</sup>Owen Ayres & Associates, Inc., Recreation Activity Management Study--Racine County, Wisconsin, 1979.

# Map 31

## GENERAL SITE DEVELOPMENT PLAN FOR CLIFFSIDE PARK AND CALEDONIA LAKE MICHIGAN PARK



Source: SEWRPC.



National Guard target range site is developed. Construction of this launch area in the ravine would involve excavating a pool area suitable for boat launching within the ravine and, further, would involve excavating a channel to the lake. An access road and facilities related to the boat launch area, including rest rooms and parking area, would also be constructed. The provision of such a facility in this reach of the Lake Michigan shoreline between the boat launch site at the mouth of Oak Creek in the City of South Milwaukee and the Pershing Park launch ramp in the City of Racine harbor would increase the safety of Lake Michigan boating along this shoreline reach. It is apparent that the development of a winter sports area is dependent upon either the bluff stabilization effort along the Lake Michigan shoreline east of the Crestview subdivision or upon the development of a boat launch area in the ravine located south of the National Guard target range site. Accordingly, it is recommended that should fill be available, a winter sports area be developed within Cliffside Park. It is also recommended that consideration be given to the development of the boat launch facility. However, the feasibility of such a facility must be determined through more detailed planning and engineering studies, including an evaluation of alternative harbor designs; detailed environmental studies, including an evaluation of potential adverse impacts that construction of such a facility may have on water quality, fish life, and shoreline erosion; and detailed economic analysis, including an evaluation of the benefits and costs involved.

Caledonia Lake Michigan Park is a 22-acre site located adjacent to Cliffside Park east of the Crestview subdivision. Given the location of Caledonia Lake Michigan Park along both the ravine located in the southeastern corner of Cliffside Park and along the Lake Michigan shoreline, it is highly desirable that the development of facilities in both parks be coordinated. As previously noted, the high bluff east of the Crestview subdivision must be stabilized in order to protect Lakeshore Drive and residences within the Crestview subdivision. Therefore, it is recommended that the additional lands adjacent to the Lake Michigan shoreline between Caledonia Lake Michigan Park and Six Mile Road be acquired for shoreline stabilization purposes as well as park and open space purposes. It is also recommended that, because the bluff stabilization efforts will require structural improvements to the shoreline, the provision of direct recreational access to the lake and related recreation facilities be considered. The provision of water-dependent, resource-oriented outdoor recreation facilities, including such facilities as a beach and fishing area, would enhance the quality and diversity of recreation opportunities along the Lake Michigan shoreline in the Town of Caledonia. The provision of such facilities would also enhance the diversity of the resource-oriented facilities already provided at, and proposed to be provided at, Cliffside Park. It is also important to note that development of hiking paths within and between Cliffside Park and Caledonia Lake Michigan Park should be coordinated so that easy access between the parks can be provided.

It should be noted that the recommendations for Cliffside Park and Caledonia Lake Michigan Park presented herein have been coordinated with the Racine County coastal erosion control study recommendations prepared concurrently with the Lake Michigan public access study for Racine County. Under the coastal erosion control study, it is recommended that the Lake Michigan shoreline east of the Crestview subdivision be stabilized through structural control, while the Cliffside Park shoreline would not be so stabilized. Upon implementation of this plan, the shoreline within Caledonia Lake Michigan Park

and the proposed addition to Caledonia Lake Michigan Park would be controlled so that shoreline recession and bluff erosion would be minimized. The shoreline within Cliffside Park and within the proposed addition to Cliffside Park would continue to recede, and the probable future location of the shoreline should be utilized in the development of the site plan for Cliffside Park.

A general site development plan for Cliffside Park and Caledonia Lake Michigan Park is shown on Map 31. In the preparation of the site plan, consideration was given to the probable location of the Lake Michigan shoreline at 25-year, 50-year, and 75-year intervals, and no facilities involving costly development are proposed to be located east of the 75-year bluff recession line. As shown on Map 31, additional land would be acquired east of Michna Road, west of Michna Road, north of Seven Mile Road, and north of the existing northern boundary of Cliffside Park. In addition, lands would also be acquired along the Lake Michigan shoreline east of the Crestview subdivision between Caledonia Lake Michigan Park and Six Mile Road. Under this proposal, a total of 328 acres of additional park lands would be acquired and, combined with the 214 acres at Cliffside Park and the 22 acres of Caledonia Lake Michigan Park, the total area under the plan for Cliffside Park and Caledonia Lake Michigan Park would be 564 acres.

As further shown on Map 31, certain types of outdoor recreation facilities would be appropriately located throughout the park. A nature center would be located northeast of the campground and adjacent to the large ravine, and the winter sports area would be located near the intersection of Michna and Seven Mile Roads. A variety of trail facilities would be located throughout the park and would be consistent with the protection and preservation of sensitive natural resource areas, including both the Lake Michigan shoreline and the ravines located within the site. An additional group camping area would be provided east of Michna Road and north of the existing campground, while picnic areas and informal playfields would be located between the nature center and the proposed new group camping area. Access to the lakeshore would be provided at Caledonia Lake Michigan Park, and a hiking trail connecting the two parks would be provided. Finally, as shown on Map 31, the mouth of the ravine located south of the National Guard target range has been allocated to the development of boat launch facilities, should such facilities be required following detailed engineering, environmental, and economic studies.

Upon full implementation of the recommendations for Cliffside Park and Caledonia Lake Michigan Park, a wide variety of outdoor recreation opportunities would be provided in a rustic, Lake Michigan setting. Unique outdoor recreation facilities--including a nature center and nature trail along the Lake Michigan bluff and above and within the ravines; campgrounds having access to a variety of trail facilities and the Lake Michigan shoreline; picnic areas in a natural setting; and facilities for a variety of winter activities--would be provided. This site then, would represent the most diverse, large, open space providing resource-oriented outdoor recreation facilities in Racine County.

#### Racine Waterfront Parks

In contrast to the more rustic, open space outdoor recreation opportunities provided and proposed to be provided at Cliffside Park, the Racine waterfront parks offer opportunities to participate in a wide variety of water-dependent

activities, such as swimming, boating, and fishing along the Lake Michigan shoreline in a developed urban setting. The City of Racine waterfront parks consist of Lakeshore North, the Racine Zoological Gardens, Lakeview Park, North Beach, Pershing Park, Meyers Park, Simonsen Park, 17th Street Park, Lakeshore South, and Roosevelt Park. Together, these sites have an area of 157 acres and provide a variety of outdoor recreation facilities, including a swimming beach, harbor facilities and boat launch ramps, picnicking opportunities, a zoo, and areas for beach activities and passive recreation. It is recommended that these facilities be upgraded and additional water-dependent outdoor recreational facilities be developed in the Racine waterfront parks.

Concurrent with the conduct of this Racine County Lake Michigan public access study, a study concerning the provision of outdoor recreation facilities in the Racine waterfront parks was conducted by a consultant under contract to the City of Racine. This study was intended to provide detailed recommendations for the development of a full range of outdoor recreation facilities in the City's waterfront parks.

Four guidelines for the design of outdoor recreation facilities, together with general proposals for the types of facilities to be provided in the City's waterfront parks are, however, set forth herein. In addition, in order to facilitate the coordination of the recommendations contained in the two studies, the conceptual diagram for the Racine waterfront parks as prepared by the consultant to the City is summarized in this section.

Design Guidelines: The Racine County Lake Michigan Public Access Study Technical Advisory Committee recommended that the following guidelines be considered in the design of all proposed new facilities within the City of Racine waterfront parks:

1. Direct access to the Lake Michigan shoreline, as well as to the Root River shoreline within the study area, should be provided to the maximum extent practicable in the development of additional outdoor recreation facilities within the existing Lake Michigan waterfront parks and in the redevelopment of privately owned lands adjacent to the Lake Michigan shoreline and the Root River;
2. Recreation trails and routes, including a pleasure drive, scenic drive, bicycle route, and pedestrian path, should be provided within and between the Lake Michigan waterfront parks to promote continuity among the parks and to enhance the diversity of outdoor recreation opportunities provided in the waterfront parks. In addition, such recreation trails and routes should promote continuity between the Lake Michigan waterfront parks and the existing and proposed future outdoor recreation opportunities along the main stem of the Root River, including outdoor recreation opportunities provided in the city parks and the private and commercial outdoor recreation sites;
3. Only those outdoor recreation facilities which relate directly to the Lake Michigan shoreline or facilities for activities which are enhanced by the presence of Lake Michigan shoreline should be provided in the Racine waterfront parks; and
4. The development of additional outdoor recreation facilities in Racine waterfront parks should be compatible with, and not adversely affect,

the natural resource features associated with Lake Michigan and its shoreline. In addition, in the design and development of additional facilities, open space should be promoted in order to enhance the character of, and provide relief from, the more intensively developed urban lands located adjacent to the waterfront parks.

Public Access Study Recommendations: Following the intent of the above guidelines, it is recommended that as urban redevelopment occurs along the Lake Michigan shoreline in the City of Racine between Roosevelt Park and Lakeshore North consideration be given to the public acquisition of additional lake shoreline in order to enhance the opportunities for public access to Lake Michigan along this reach of shoreline. This recommendation is consistent with various redevelopment plans prepared by the City of Racine, Department of City Development. In particular, in the detailed redevelopment plan for the lakeshore development project area--which is located south of the Root River and bounded by Lake Michigan on the east, 6th Street on the south, Main Street on the west, and 3rd Street on the north--it was recommended that a strip of land a minimum of 25 feet in width along the Lake Michigan shoreline be reserved for public access and use. It was further recommended that during the redevelopment process, vistas to Lake Michigan and its shoreline be provided from the redevelopment area. Thus, in general, it is recommended that as detailed planning for the redevelopment of nonpublicly owned lands along the Lake Michigan shoreline proceeds, consideration be given to the provision of a continuous strip of land along the shoreline providing public access to Lake Michigan.

In addition, it is recommended that a variety of resource-oriented facilities be provided in the existing Racine waterfront parks. Under this proposal, it is recommended that additional boat launching ramp lanes and related facilities be developed in Pershing Park. In addition, a special activities area to accommodate special events such as Salmon-O-Rama would be developed at Pershing Park; direct water access facilities providing opportunities for such activities as fishing and beach activities would be provided at Meyers Park; picnic areas would be provided at Pershing Park, Meyers Park, and 17th Street Park; and designated walkways for pedestrian use would be provided between North Beach and Pershing Park, Pershing Park and Meyers Park, Meyers Park and Simonsen Park, Simonsen Park and 17th Street Park, 17th Street Park and Lakeshore South, and North Beach and the Racine Yacht Club. Outdoor recreation trail and route facilities would also be provided within and adjacent to Racine waterfront parks, as described in the plan element concerning provision of trail and route facilities presented in the following section of this chapter.

Conceptual Diagram Recommendations: As previously noted, the Racine County Lake Michigan public access study was conducted concurrently with a study of the Racine waterfront undertaken by a consultant for the City of Racine.<sup>2</sup> The city study included preparation of a conceptual diagram to guide the provision of a variety of outdoor recreation facilities within and adjacent to the City waterfront parks in an effort to increase the accessibility, attractiveness, and continuity of the waterfront park system, particularly in areas

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<sup>2</sup>The Sanborn Group, Inc., Concepts: Racine Waterfront Parklands, July 1982.

adjacent to the Racine harbor and the Root River estuary. It is important to note that the concept diagram, at the time of the completion of the public access study, was under preparation and therefore the recommendations of that conceptual diagram should be considered as preliminary recommendations, subject to revision and City Council approval.

A number of development proposals were set forth in the city study. At North Beach the southern one-third of the site located immediately north of the Racine Yacht Club would be utilized for swimming, and a boardwalk, shelter building, and variety of other facilities for intensive outdoor recreation activities would be provided; the middle one-third of the North Beach site would be utilized for picnicking and informal beach activities; and the northern one-third of the site would be utilized for passive recreation and would, on the whole, be left in a natural state.

The conceptual diagram prepared by the consultant also recommends the provision of additional open, green space "nodes" along the south side of the Root River adjacent to Lake Michigan and along the existing public roadway north of the Root River between Michigan Boulevard and the Lake Michigan shoreline. The conceptual diagram also proposes that a marina be created within the breakwater area along the Lake Michigan shoreline north of the existing Pershing Park boat launch and that the City encourage the development of recreation- and water-related shops in this area adjacent to the proposed marina. The concept diagram also suggests that the City encourage the private sector to provide boat tours along the Root River and inner harbor area.

At Pershing Park, the concept diagram proposes that the area south of the existing boat launch ramps be developed to accommodate outdoor recreation- and Lake Michigan-related special events, including such existing events as the Salmon-O-Rama. In addition, the concept diagram proposes that a large parking area be developed in the central portion of Pershing Park and that the area currently utilized for parking at the southern end of the park be cleared to provide additional space for water-related facilities proposed for development at Meyers Park. In addition, a promenade and parkway road would be provided at Pershing Park.

The concept diagram also proposes that a variety of boating facilities be provided within the breakwater area south of Meyers Park and that related support facilities be developed at Meyers Park, Simonsen Park, 17th Street Park, and Lakeshore South. Under this proposal, the existing breakwater would be extended south toward the Racine sewage treatment plant, and an "inland lake" would be created within the breakwater. This "inland lake" would provide for a variety of boating and other water-related activities such as canoeing, row boating, and sail surfing. In addition, this "inland lake" could be utilized for special boating events, such as water skiing and boating shows, with spectator areas being provided within the Racine waterfront parks overlooking the lake. Fishing opportunities would also be provided along the extended breakwater. It is important to note that, as in the case of the proposed provision of boat launch facilities at Cliffside Park, the feasibility of the provision of an extended breakwater south of Meyers Park must be determined through more detailed planning, environmental, and engineering studies. Finally, under this proposal, additional parking areas would be provided near the sewage treatment plant.

In summary the concept diagram prepared for the City of Racine by a consultant recommends the provision of a variety of water-related outdoor recreation facilities and would enhance the aesthetic quality of, and promote public access to, Lake Michigan and the Lake Michigan shoreline in the City of Racine waterfront parks. The proposals are consistent with the design guidelines set forth under the Racine County Lake Michigan public access study. Following the final revisions of the concept diagram and adoption by the Racine Common Council, it is envisioned that the City would develop more detailed designs which would incorporate the proposals set forth under both the Racine County Lake Michigan public access study as set forth herein and the concept diagram for the Racine waterfront parks as summarized above. The development of facilities proposed under these studies would result in the provision of a variety of outdoor recreation opportunities related to Lake Michigan and its shoreline and would constitute a unique asset to both the City of Racine and Racine County. In addition, the water-dependent outdoor recreation facilities provided in the urban setting within the Racine waterfront parks, in combination with the water-enhanced outdoor recreation facilities provided in the more rustic setting at Cliffside and Caledonia Lake Michigan Parks, would result in the provision of a full range of outdoor recreation opportunities related to Lake Michigan and its shoreline within Racine County.

#### Other Lake Michigan Parks

As noted in the previous sections, Cliffside Park and Caledonia Lake Michigan Park are proposed to provide a variety of water-enhanced, resource-oriented outdoor recreation facilities--including a nature center, camping area, picnic areas, and hiking, biking, and ski touring trails--while the Racine waterfront parks are proposed to provide a variety of water-dependent, resource-oriented outdoor recreation facilities--including swimming, boating, and fishing facilities, as well as areas for special events and activities related to Lake Michigan and its shoreline. In addition to the provision of such facilities at these two major sites along the Racine County Lake Michigan shoreline, it is also recommended that water-related outdoor recreation facilities be provided at six smaller individual park and public outdoor recreation sites--including four existing sites and two proposed new sites--on the Racine County Lake Michigan shoreline.

Existing Sites: The four existing park and public outdoor recreation sites along the Lake Michigan shoreline in Racine County are the Olympia Brown School site, Shoop Park, the Village of North Bay Park, and Lake Park. The Olympia Brown School site, owned by the Racine Unified School District, is a seven-acre site located between Five and One-Half Mile Road and Four Mile Road in the Town of Caledonia. Facilities at the site are related primarily to the provision of opportunities for school-related activities and consist of playground and playfield areas. It is recommended that this site be maintained for school-related recreation activities.

The Village of North Bay park site is a four-acre site owned by the Village located along a ravine in the central portion of the Village. While there are no formal designated facilities at this site, opportunities for swimming, beach activities, and passive recreation are provided. It is also recommended that this site be maintained for outdoor recreation use.

Shoop Park is a 63-acre site owned by the City of Racine and located along Lighthouse Drive in the Village of Wind Point. Existing facilities at this site include a nine-hole regulation golf course, an informal boat access and fishing area, and an area for picnicking and passive recreation. It is recommended that these facilities be maintained and that hiking and pedestrian paths within and adjacent to the picnicking areas and providing access to the Lake Michigan shoreline be provided within this site.

Lake Park is a three-acre site located along Lakeshore Drive in the Town of Mt. Pleasant, and owned by the Town. No formal designated facilities are currently provided at the site. Recently, the Town of Mt. Pleasant completed construction of an underdrain system aimed at reducing groundwater seepage along the bluff face, and thereby reducing erosion of the bluff within the park site. Since the shoreline recession and bluff erosion problems appear to be minimized, it is recommended that an area for passive recreation, including an area for picnicking, be provided at the site.

Proposed Park Sites: Under the Racine County Lake Michigan public access study, it is also recommended that two additional sites along the Lake Michigan shoreline be acquired and developed for public access and outdoor recreation purposes. The first site, identified as proposed Park Site A, encompasses six acres of undeveloped land located east of Main Street and north of the northern end of Michigan Boulevard in the City of Racine. The second site, identified as proposed Park Site B, encompasses seven undeveloped acres of land and is located east of Sheridan Road in the northeast one-quarter of U. S. Public Land Survey Section 32, Township 3 North, Range 23 East, in the Town of Mt. Pleasant.

A general site development plan for each of the proposed park sites was prepared under the Lake Michigan public access study. It is important to note that the characteristics of the Lake Michigan shoreline and the bluff overlooking the lake at each site affect the type of outdoor recreation facilities which can be provided at these sites. The Racine County coastal erosion management study conducted concurrently with the Racine County Lake Michigan public access study identified the probable future location of the Lake Michigan shoreline and bluff recession for 25-year, 50-year, and 75-year intervals. In addition, the study identified the location of the top of the bluff if structural control--including regrading of the bluff face to a stable slope and the stabilization of the shoreline and bluff toe--were provided. This information was utilized in the preparation of general development plans for each of the proposed new park sites.

Proposed Park Site A is located approximately one-half mile north of Lakeshore North--the northernmost park in the Racine waterfront parks complex--and would serve as another access to Lake Michigan along the existing and proposed outdoor recreation trails and routes in the study area. Proposed Park Site A is the only undeveloped parcel of land which can meet the identified need for urban outdoor recreation facilities in this portion of the City of Racine. Therefore, it is recommended that a combination of resource-oriented and nonresource-oriented facilities be developed at this site. Specifically, it is recommended that the following facilities be provided: playground and playfield facilities, an area for passive recreation activity--including picnicking--and an area that can serve as a resting and termination point for

outdoor recreation trail activities--including hiking and bicycling. In addition, appropriate support facilities, including parking lot and rest room facilities, should be provided at this site.

A general development plan for proposed Park Site A is shown on Map 32. As previously indicated, the probable location of the top of the bluff without structural control for 25-year, 50-year, and 75-year interval periods and the probable location with stabilization of the bluff and shoreline through structural control measures were obtained from the Racine County coastal erosion management study. As shown on Map 32, no significant loss of area is anticipated at the site with provision of structural stabilization measures. Therefore, it is recommended that direct access to the Lake Michigan shoreline be provided at the site in order to enable opportunities for participation in various beach activities as well as swimming. It should be noted that if structural control measures are not provided at the site and the shoreline and bluff are permitted to recede naturally some loss of area may occur, and special stairways or pathways to the lakeshore may have to be constructed and maintained periodically as necessary. However, should the bluff and shore be stabilized through structural methods, the provision of an access path to the lake shoreline can be incorporated into the plans for the shoreline and bluff stabilization work.

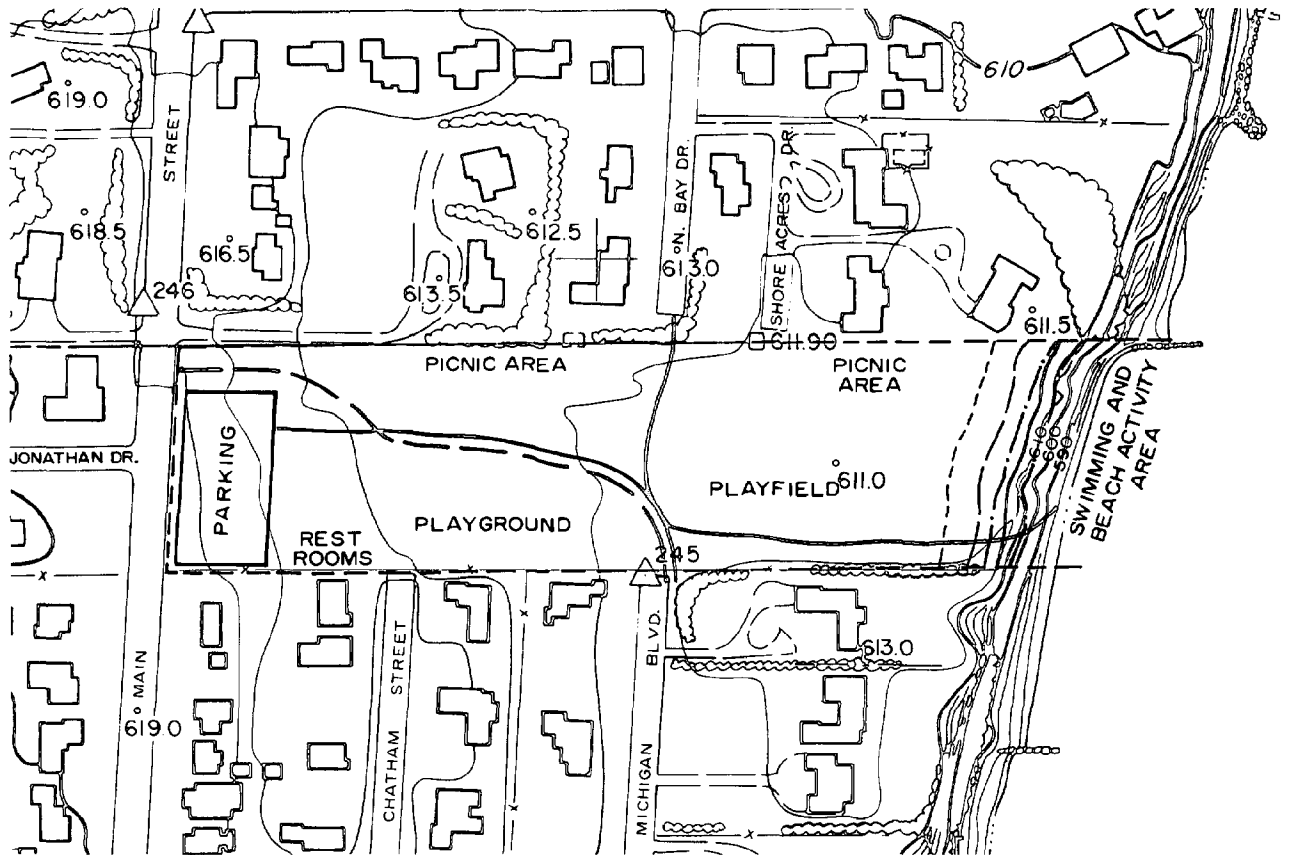
Proposed Park Site B is located approximately one-half mile north of the Racine-Kenosha County line in an urbanizing area of the Town of Mt. Pleasant. This site is the only large, undeveloped parcel along the Lake Michigan shoreline in the Town and only one of two such large, undeveloped parcels remaining along the entire Lake Michigan shoreline between the City of Kenosha and the City of Racine. Proposed Park Site B can meet the identified needs for urban outdoor recreation facilities in this portion of the Town. Therefore, it is recommended that a combination of resource-oriented and nonresource-oriented facilities be developed at proposed Park Site B. Specifically, it is recommended that playground and playfield facilities and an area for passive recreation activities, including picnicking, be provided. In addition, it is recommended that appropriate support facilities, including a parking lot and rest room facility, be provided at this site.

As in the case of proposed Park Site A, the probable location of the top of the bluff without structural control for 25-year, 50-year, and 75-year interval periods was obtained for proposed Park Site B from the Racine County coastal erosion management study. As shown on Map 33, it is anticipated that, with no structural control, over a 75-year period about one-third of the existing area of the site may be lost to bluff and shoreline erosion. As further shown on Map 33, structural control measures may be expected to significantly reduce the loss of area at the site. Because of the differences in site area and bluff and shore characteristics with and without structural controls, alternative general development plans for proposed Park Site B were prepared. The first alternative plan anticipates that bluff and shoreline erosion will occur naturally without structural control. Under the first alternative, all proposed facilities would be located in the western one-half of the park site and, due to the relatively high rate of recession of the bluff and shoreline, it would be difficult and costly to provide direct access to the Lake Michigan shoreline (see Map 34). Under the second alternative, it is anticipated that the top of the bluff and the Lake Michigan shoreline would be stabilized by structural control measures. Under this alternative, direct



# Map 32

## GENERAL SITE DEVELOPMENT PLAN FOR PROPOSED PARK SITE A



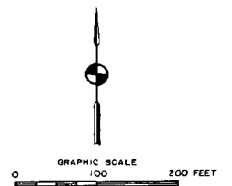
### LEGEND

#### LOCATION OF THE TOP OF THE BLUFF

- EXISTING
- 25-YEAR INTERVAL WITHOUT STRUCTURAL CONTROL MEASURES
- 50-YEAR INTERVAL WITHOUT STRUCTURAL CONTROL MEASURES
- 75-YEAR INTERVAL WITHOUT STRUCTURAL CONTROL MEASURES
- WITH STRUCTURAL CONTROL MEASURES

#### PROPOSED OUTDOOR RECREATION TRAILS

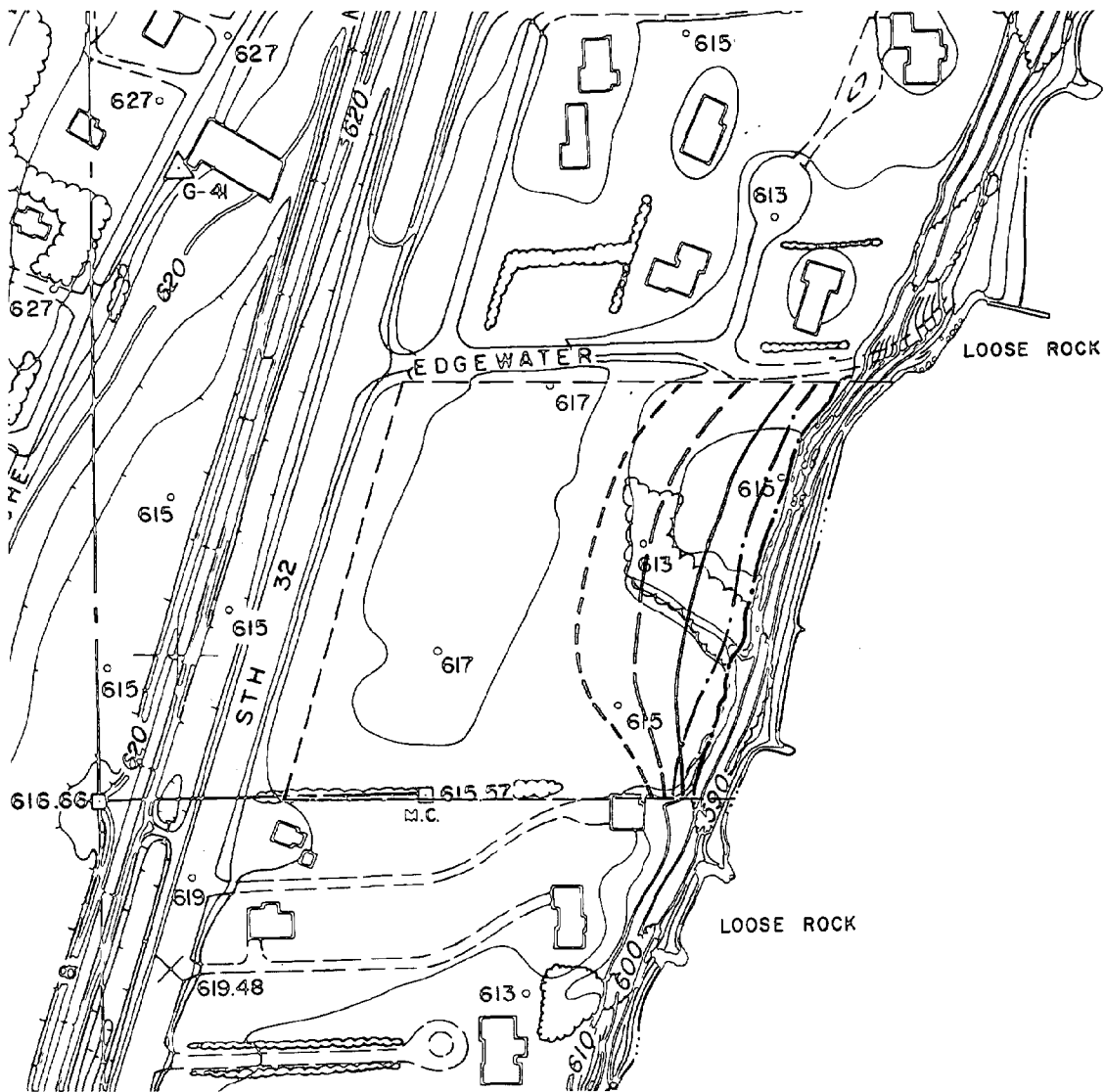
- BICYCLE ROUTE
- PEDESTRIAN PATH



Source: SEWRPC.

# Map 33

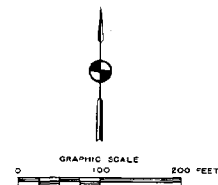
## BLUFF AND SHORELINE EROSION AT PROPOSED PARK SITE B



### LEGEND

#### LOCATION OF THE TOP OF THE BLUFF

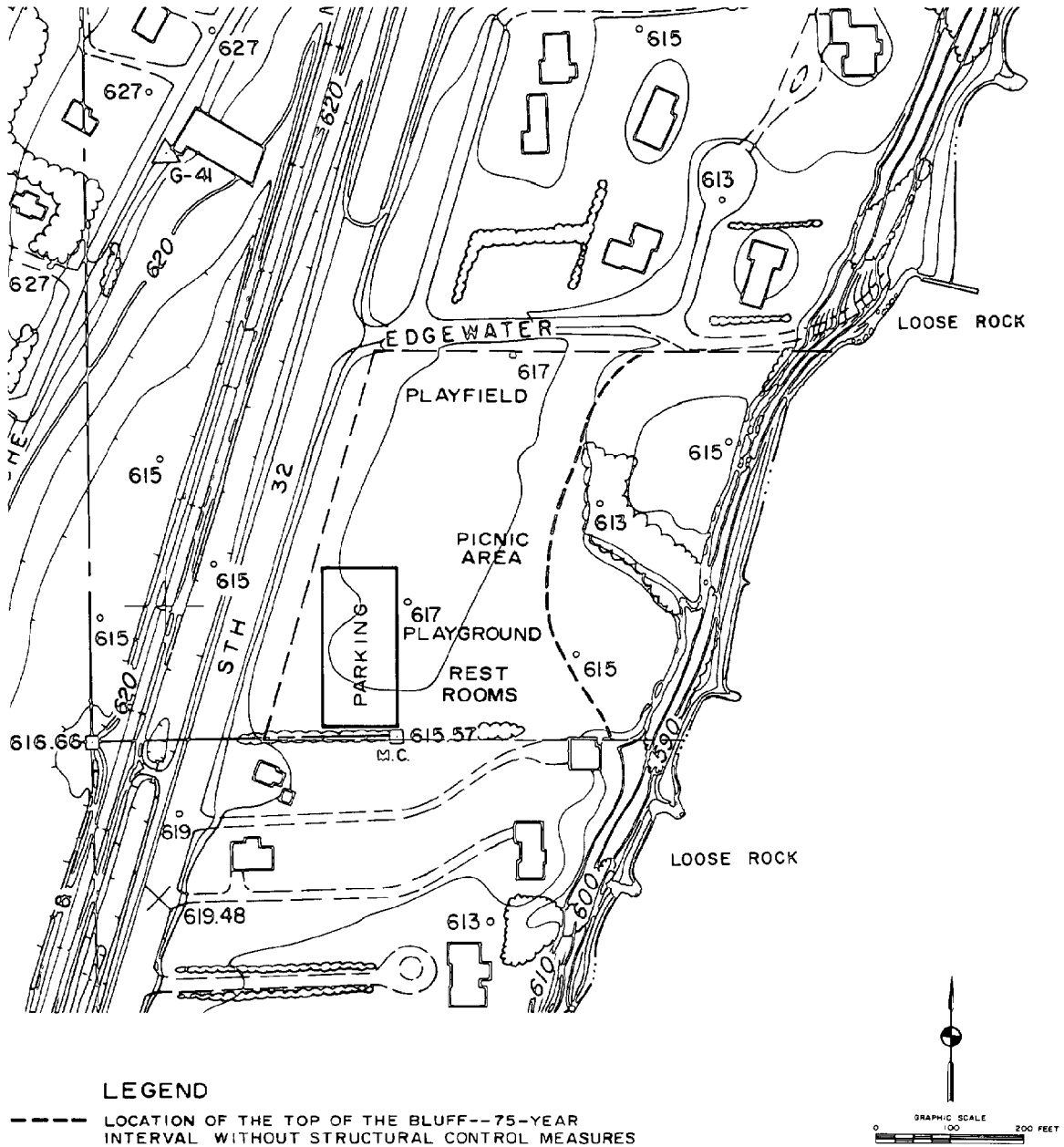
- EXISTING
- 25-YEAR INTERVAL WITHOUT STRUCTURAL CONTROL MEASURES
- 50-YEAR INTERVAL WITHOUT STRUCTURAL CONTROL MEASURES
- - - 75-YEAR INTERVAL WITHOUT STRUCTURAL CONTROL MEASURES
- WITH STRUCTURAL CONTROL MEASURES



Source: SEWRPC.

Map 34

ALTERNATIVE GENERAL SITE DEVELOPMENT PLAN FOR PROPOSED  
PARK SITE B - UNCONTROLLED BLUFF AND SHORELINE EROSION



Source: SEWRPC.

access to the lake would be provided as part of the process of regrading the bluff and stabilizing the bluff toe. Stabilization of the bluff and shoreline would also result in the preservation of a portion of the small, wooded area on the site and, under this alternative, a picnic area would be provided in the eastern portion of the site. It is also anticipated that, with structural control measures, an area for beach activity, possibly including fishing and swimming, would be provided. The general development plan for this second alternative is shown on Map 35.

In Chapter IV of this report, a need for an urban park and selected intensive nonresource-oriented facilities was identified for a portion of the study area located generally between Six Mile Road and Four Mile Road in the Town of Caledonia. Since there are no suitable sites located along the Lake Michigan shoreline which can adequately meet the need for such a site and facilities, and since the provision of the needed facilities does not require Lake Michigan frontage, it is recommended that the need be met by the provision of an urban park located outside the shoreland study area. Under this proposal, a neighborhood park and nonresource-oriented facilities would be provided as urban development occurs adjacent to the study area in U. S. Public Land Survey Section 17, Township 4 North, Range 23 East (see Map 30), thereby serving the needs of residents within and adjacent to this unserved portion of the study area.

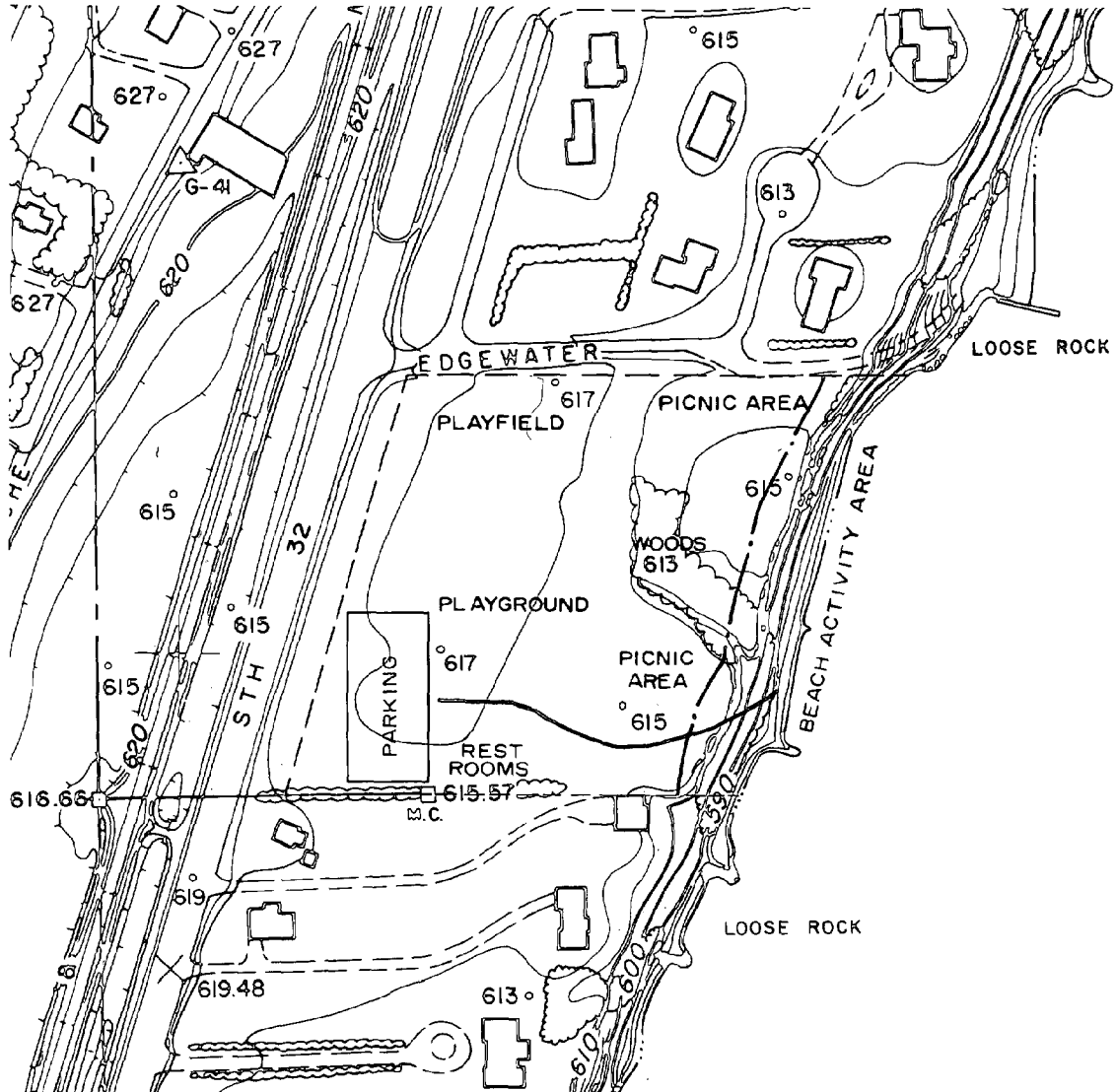
### Outdoor Recreation Trails

An important element in the overall public access plan for the Racine County Lake Michigan shoreline study area involves the provision of outdoor trails and routes. Such facilities can provide opportunities to move through and experience the full range of coastal environments in Racine County and can link outdoor recreation sites providing access to the Lake Michigan shoreline. Important outdoor recreation trail facilities include routes for pleasure driving, bicycling, and walking.

Under the Racine County Lake Michigan public access study, it is recommended that a pleasure driving route be located within and adjacent to the study area along the entire length of the Lake Michigan shoreline. This route would link the important park sites along the Lake Michigan shoreline in Racine County to each other and to other important outdoor recreation sites in Milwaukee County and Kenosha County. The general location of this pleasure driving route is shown on Map 36. As shown on Map 36, the route would link Cliffside Park, Caledonia Lake Michigan Park, Shoop Park, proposed Park Site A, the Racine waterfront parks, and proposed Park Site B, and would be approximately 18 miles in length. In addition, the route would connect to Bender Park and other Milwaukee County parks to the north and to Alford Park and other City of Kenosha parks to the south. It is important to note that, due to the existing public road network in Racine County, it is difficult to connect all of the publicly owned outdoor recreation and open space sites along the shoreline in a convenient, direct route, and to provide a continuous view of Lake Michigan in Racine County. However, the sites proposed to be linked along the pleasure driving route would provide a variety of outdoor recreation opportunities at regular intervals along the entire Racine County Lake Michigan shoreline, as well as intermittent vistas of Lake Michigan.

Map 35

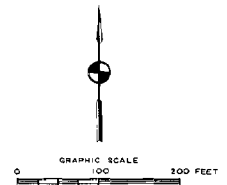
ALTERNATIVE GENERAL SITE DEVELOPMENT PLAN FOR  
PROPOSED PARK SITE B - BLUFF AND SHORELINE  
EROSION STRUCTURAL STABILIZATION



LEGEND

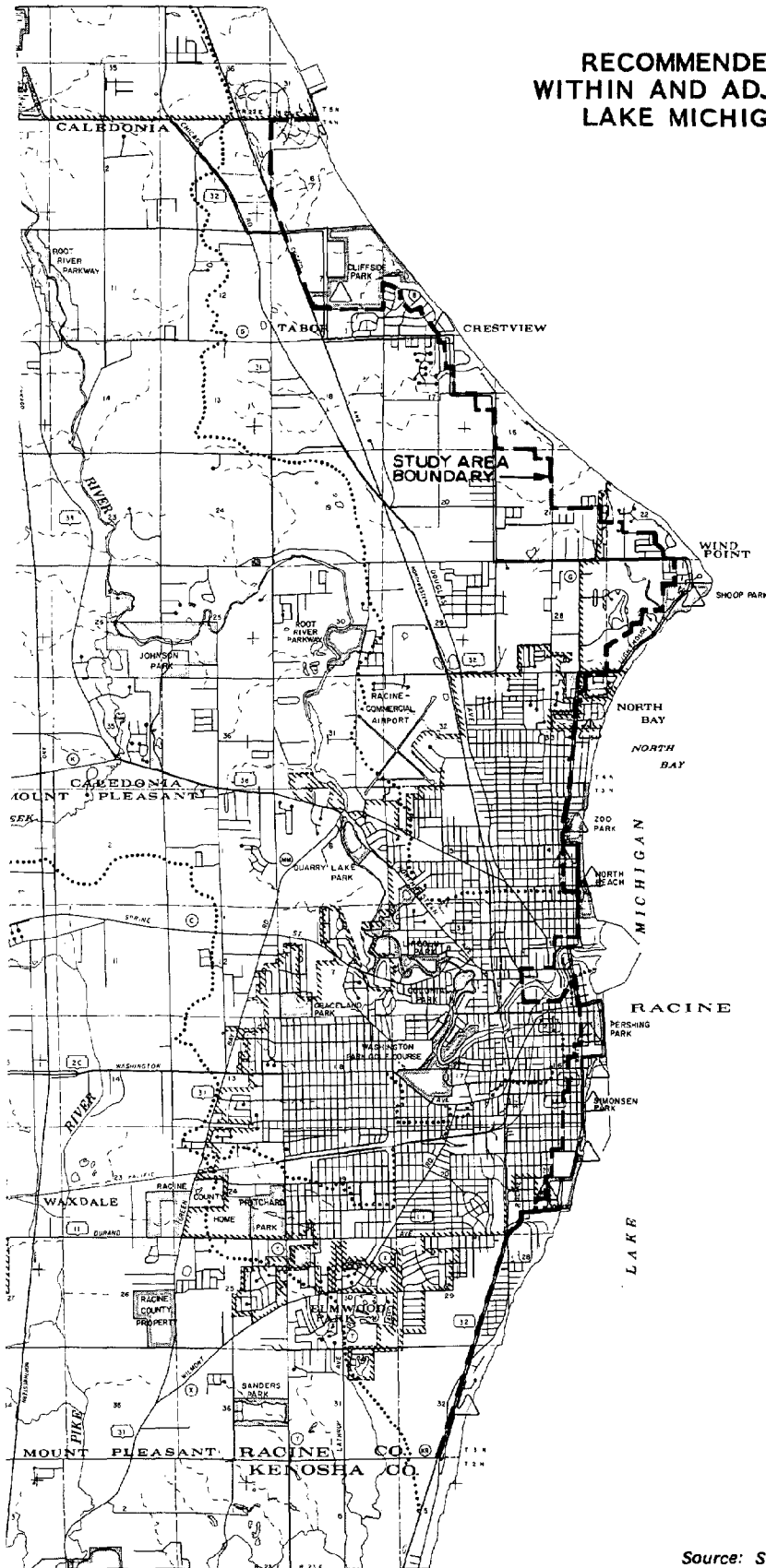
- LOCATION OF THE TOP OF THE BLUFF WITH STRUCTURAL CONTROL MEASURES
- PEDESTRIAN ACCESS TO LAKE MICHIGAN SHORELINE

Source: SEWRPC.





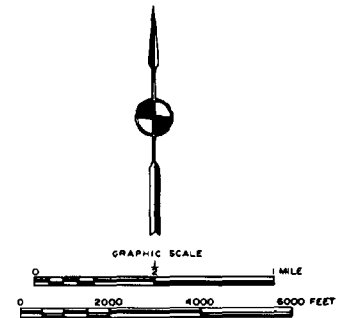
Map 36

RECOMMENDED PLEASURE DRIVING ROUTE  
WITHIN AND ADJACENT TO THE RACINE COUNTY  
LAKE MICHIGAN SHORELAND STUDY AREA



LEGEND

-  PLEASURE DRIVING ROUTE
-  PARK SITE WITHIN THE STUDY AREA LOCATED ALONG THE PLEASURE DRIVING ROUTE



Source: SEWRPC.

In addition to the provision of a pleasure driving route, it is also recommended that a drive having a view of the Lake Michigan shoreline and outdoor recreation sites along the Lake Michigan shoreline in the City of Racine be provided in conjunction with the development of the Racine waterfront parks. Under this proposal, it is envisioned that a continuous view of the Lake Michigan shoreline and parks along the Lake Michigan shoreline would be provided between Lakeshore North on the north and Meyers Park on the south, a distance of approximately two and one-half miles.

The Racine County bikeway, which is located on Wisconsin Electric Power Company rights-of-way, and the City of Racine bike route which connects the lakeshore parks, generally provide facilities for bicycling within and between the important outdoor recreation and open space facilities within the Racine County Lake Michigan shoreland study area. Accordingly, it is recommended that the combination of city and county trails be maintained. It is also recommended that a connecting trail segment be provided to link Cliffside Park with Bender Park in Milwaukee County. It should be noted that the Racine County bikeway is connected to the Kenosha County bikeway on the south, thereby providing continuity for the biking facilities between Racine and Kenosha Counties. Under this proposal, an 18-mile bicycle route connecting Cliffside Park, Shoop Park, proposed Park Site A, and the Racine waterfront parks would be provided. As previously noted, facilities for participants in bicycling activities would be provided at each of these sites. The general location of the bike route within and adjacent to the Racine County Lake Michigan shoreland study area is shown on Map 37.

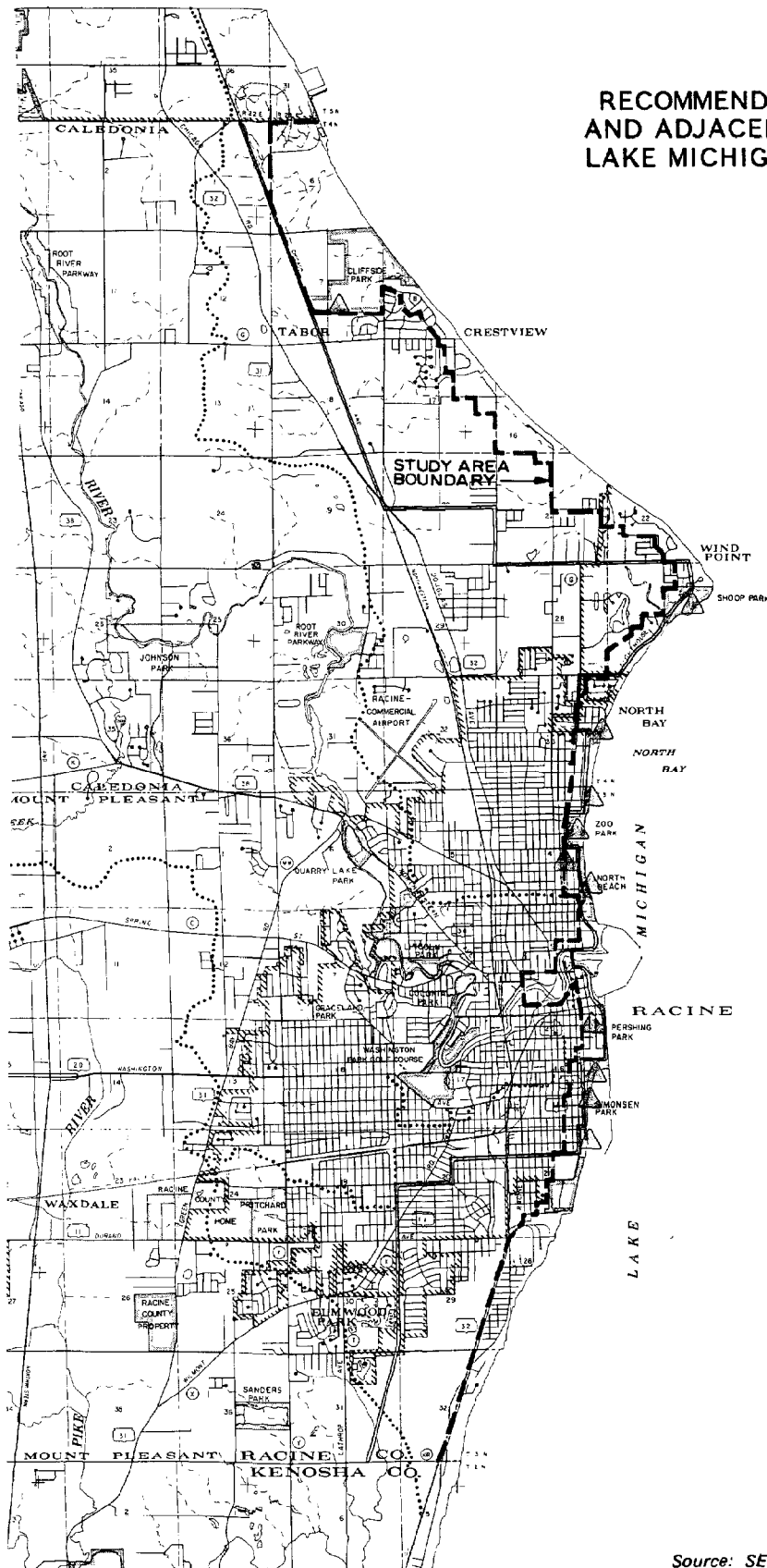
Pedestrian paths between adjacent parks can provide convenient access to an increased variety of outdoor recreation facilities. It is accordingly recommended that designated pedestrian paths be provided within the Racine waterfront parks. In addition, it is recommended that a designated walkway be provided to connect proposed Park Site A to the Racine waterfront parks, thereby establishing a continuous walkway along the entire length of the Lake Michigan shoreline in the City of Racine, and to connect proposed Park Site A to the Village of North Bay Park. It is also envisioned that a connection to trails along the Root River corridor west of the study area be provided. It should also be noted that, as discussed earlier in this chapter, a pedestrian walkway would be provided between Cliffside and Caledonia Lake Michigan Park and within Shoop Park. The general location of the proposed pedestrian path between proposed Park Site A and the Racine waterfront parks is shown on Map 38.

### Natural Resource Preservation



Chapter II of this report describes various elements of the natural resource base within the Racine County Lake Michigan public access study area and discusses the importance of the proper management of the natural resource base to the maintenance of a healthy environment, to the provision of good outdoor recreational opportunities, and to the protection of the natural beauty of the coastal area of Racine County. As indicated in Chapter II, the most important natural resource features in the study area are encompassed by the primary environmental corridor which, in the study area, consists of a single, continuous, narrow band along the entire length of the Lake Michigan shoreline, as well as of the wetlands and woodlands along streams and ravines draining

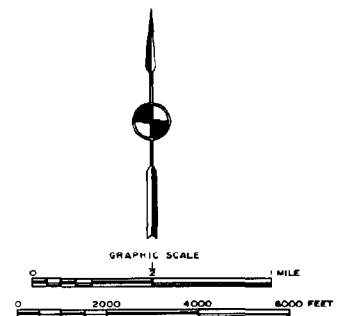
Map 37

RECOMMENDED BICYCLE ROUTE WITHIN  
AND ADJACENT TO THE RACINE COUNTY  
LAKE MICHIGAN SHORELAND STUDY AREA



LEGEND

-  BICYCLE ROUTE
-  PARK SITE WITHIN THE STUDY AREA LOCATED ALONG THE BICYCLE ROUTE

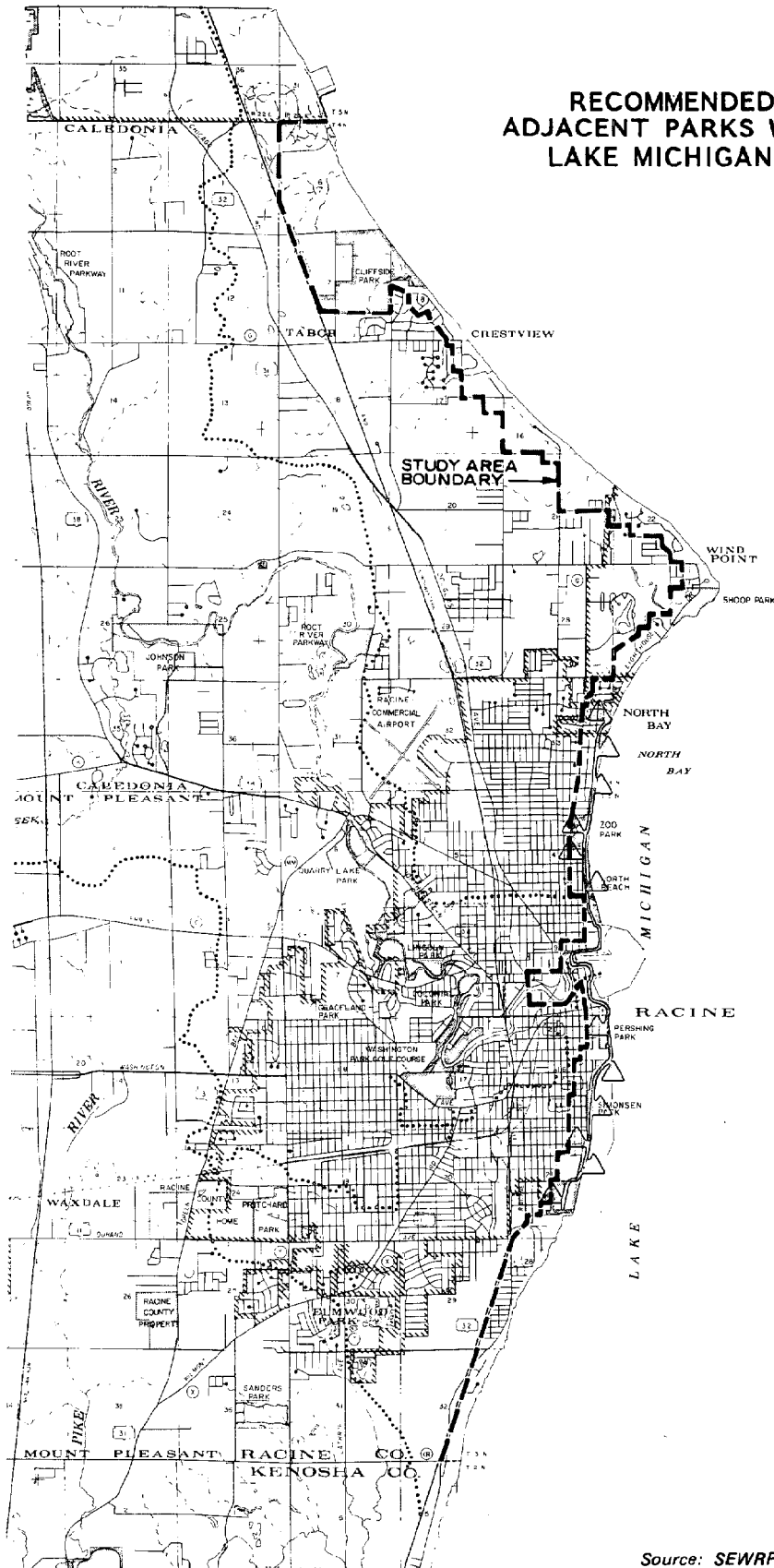


Source: SEWRPC.



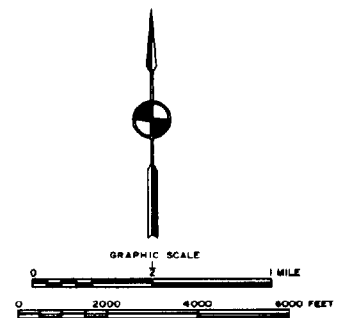
Map 38

# RECOMMENDED HIKING PATH BETWEEN ADJACENT PARKS WITHIN THE RACINE COUNTY LAKE MICHIGAN SHORELAND STUDY AREA



## LEGEND

- HIKING PATH
- △ PARK SITE LOCATED ALONG HIKING PATH



Source: SEWRPC.

into the lake. The delineation of this corridor recognizes that the Lake Michigan shoreline, including those intensively developed portions along the shoreline, is a unique area having important recreational, aesthetic, and ecological value which should be protected and maintained. Therefore, it is recommended that the remaining nonurban lands in the designated primary environmental corridor be preserved in essentially natural, open uses and that the developed portion of this corridor be managed properly to ensure the maintenance of the underlying ecological, scenic, and recreational values associated with this corridor.

Specifically under this proposal, the 273 acres of primary environmental corridor lands located within existing park and open space sites, or 35 percent of the approximately 776 acres of environmental corridor land in the study area, would be maintained in park and open space uses. An additional 58 acres, or 8 percent of the total primary environmental corridor in the study area, would also be preserved in open space use through acquisition for public park and open space purposes upon full implementation of the park and open space acquisition proposals set forth in this report. In addition, approximately 88 acres, or 11 percent of the total primary environmental corridor lands, would be maintained in natural, open land uses by appropriate conservancy zoning and other public land use regulations. These lands are located primarily within the major ravines in the study area not already held in public open space ownership. The remaining 357 acres, or 46 percent of the primary environmental corridor lands in the study area, are in urban use and would remain in such use, being regulated to preserve to the maximum extent practicable the open space values present on such lands. However, it is also recommended that, should such urban lands become available for public acquisition and conversion to park or open space use, such lands should be considered for acquisition for such purposes and for the provision of continuity between existing and proposed publicly owned park and open space sites located along the Lake Michigan shoreline.

In addition to the preservation of lands within the primary environmental corridor, it is also recommended that important woodlands located within isolated natural areas in the northern portion of the study area be preserved in natural open space uses. Under this proposal, about 32 acres of woodland would be preserved through public land use regulations. In addition, 48 acres of woodland located within the proposed Cliffside Park addition would be preserved through public acquisition.

## PLAN EVALUATION

As previously noted, the purpose of the Lake Michigan public access study is the development of a plan to guide Racine County and the concerned units and agencies of government within the County in the maintenance of existing, and acquisition and development of new sites and facilities to accommodate public recreational access to Lake Michigan and the Lake Michigan shoreline in Racine County. This section presents an evaluation of the ability of the recommended plan to meet the objectives and standards pertaining to the provision of such sites and facilities. For purposes of presentation, the types of sites and facilities required under the adopted objectives and standards have been considered under five separate categories: resource-oriented park and open space sites, including major parks and sites with frontage along the Lake

Michigan shoreline; facilities for intensive, resource-oriented activities, including swimming, beach activities, boating, passive recreation, camping, and nature study; outdoor recreation trails and routes, including a pleasure drive, a scenic drive, a bicycle route, and hiking paths; urban park and open space sites and facilities, including urban parks and nonresource-oriented facilities; and the natural resource features located within the primary environmental corridors. A summary of the additional site and facility needs, as well as the evaluation of the ability of the recommended plan to meet these identified needs, is presented in Table 14.

As indicated in Table 14, a need exists to acquire additional land at Cliffside Park in order to provide adequate area for a variety of resource-oriented facilities. Under the plan, Cliffside Park would be expanded through the acquisition of 315 additional acres of land, thereby meeting this need. In addition, a need for an additional 0.82 linear mile of public park and open space land along the Lake Michigan shoreline was identified. Under the plan, a total of 1.10 linear miles of lakeshore frontage would be acquired, including 0.59 mile at the Cliffside Park addition, 0.35 mile at the Caledonia Lake Michigan Park addition, 0.05 mile at proposed Park Site A, and 0.11 mile at proposed Park Site B, thereby meeting this need.

As further indicated in Table 14, a need to provide swimming beaches in two reaches of the Lake Michigan shoreline was identified. Under the plan, this need could be met if the design of bluff and shoreline protection at Caledonia Lake Michigan Park, proposed Park Site A, and proposed Park Site B permit the provision of swimming beaches. Similarly, the need for the provision of opportunities for beach activity in two reaches of shoreline could be met if the design of bluff and shoreline protection at Caledonia Lake Michigan Park and proposed Park Site B permit the provision of beach areas. The identified need to provide additional launch ramps and boating facilities in the Racine Harbor would be met under the plan by the provision of such facilities at Pershing Park. The identified need to provide a boat launching area in the reach of shoreline in northern Racine County and southern Milwaukee County which lack such facilities could be met by the development of such facilities in the proposed Cliffside Park addition. Under the plan, it is recommended that the economic, environmental, and technical feasibility of such development be determined through a more detailed site-specific study. The identified need to provide opportunities for passive recreation in one reach of shoreline lacking such facilities would be met by the development of such facilities at proposed Park Site B, while the need to provide a nature center would be met through the provision of a facility at Cliffside Park. It should be noted that no additional camping facilities were proposed in the study area under the plan.

As further indicated in Table 14, the identified need to provide a designated route for a pleasure drive connecting the park and outdoor recreation sites and facilities located along the Lake Michigan shoreline in Racine County would be met by the provision of a 18-mile pleasure drive located within and adjacent to the study area. The identified need to provide a continuous scenic drive having an unobstructed view of Lake Michigan and parks along the Lake Michigan shoreline could be met through the provision of a scenic drive within the Racine waterfront parks between Lakeshore North and Meyers Park. It is important to note, however, that a segment of public roadway between the southern portion of North Beach and the northern portion of Pershing Park should be provided in the design of detailed redevelopment plans for this area.

Table 14

**EVALUATION OF THE ABILITY OF THE RECOMMENDED PUBLIC ACCESS  
PLAN FOR THE RACINE COUNTY LAKE MICHIGAN SHORELAND  
STUDY AREA TO MEET IDENTIFIED PUBLIC ACCESS,  
OUTDOOR RECREATION, AND OPEN SPACE NEEDS**

Site or Facility	Additional Site or Facility Need	Evaluation of Plan's Ability to Meet Needs	Proposed Site or Facility Meeting Identified Need
Resource-Oriented Park and Open Space Sites Major Park..... Sites With Lake Michigan Frontage....	Provision of additional land at Cliffside Park Provision of an additional 0.82 linear mile of frontage	Met Met	Expansion of Cliffside Park through acquisition of 315 acres of land Acquisition of frontage at following sites: Cliffside Park addition, 0.59 mile; Caledonia Lake Michigan Park, 0.35 mile; Proposed Park Site A, 0.05 mile; Proposed Park Site B, 0.11 mile
Facilities for Intensive Resource-Oriented Activities Swimming.....  Beach Activity.....  Boating.....  Passive Recreation..... Camping..... Nature Study.....	Provision of a swimming beach in two reaches of the shoreline lacking swimming facilities  Provision of a beach in two reaches of the shoreline lacking beach facilities  Provision of additional slips and launch ramp lanes in Racine harbor Provision of a harbor of refuge and launch ramp lanes in one reach of shoreline lacking such facilities  Provision of opportunities for passive recreation in one reach of the shoreline lacking such opportunities No additional facility requirement Provision of nature center at Cliffside Park	Could be met  Could be met  Met Could be met  Met Met Met	Design of bluff and shore protection may permit provision of swimming opportunities at Caledonia Lake Michigan Park, Proposed Park Site A, and Proposed Park Site B Design of bluff and shore protection may permit provision of beach facilities at Caledonia Lake Michigan Park and Proposed Park Site B Provision of additional slips and launch ramps in Racine harbor at Pershing Park Additional detailed engineering, economic, and environmental studies may result in the provision of a harbor of refuge and launch ramp lanes in Cliffside Park addition Development of facilities for proposed Park Site B  No additional facility requirement Provision of nature center at Cliffside Park
Trails and Routes Pleasure Drive.....  Scenic Drive.....  Bike Route..... Hiking Path.....	Provision of designated route within and adjacent to the study area Provision of a continuous 2.5-mile route having an unobstructed view of Lake Michigan and parks along the Lake Michigan shoreline No additional facility requirement Provision of walkways within four existing parks and between adjacent parks	Met  Could be met  Met Met	Provision of 18-mile designated drive within and adjacent to study area Provision of 2.5-mile scenic drive within the Racine waterfront parks and adjacent to the Racine harbor  No additional facility requirement Provision of walkways within Cliffside, Caledonia Lake Michigan, Shoop, and Pershing Parks, and between Cliffside Park and Caledonia Lake Michigan Park, North Beach and Pershing Park, Pershing Park and Meyers Park, Meyers Park and Simonsen Park, Simonsen Park and 17th Street Park, and 17th Street Park and Lakeshore South
Urban Park and Open Space Sites and Facilities Urban Parks.....  Nonresource-Oriented Facilities.....	Provision of parks to serve two areas within the urban portions of the study area  Provision of selected facilities to serve four areas within the urban portions of the study area	Met  Met	Provision of Proposed Park Site B would serve one area; provision of an additional site located outside of the study area would serve the other area Provision of facilities at Pershing Park, Proposed Park Site A, and Proposed Park Site B would serve three areas; provision of facilities at a site located outside the study area would serve the other area
Natural Resource Features Primary Environmental Corridors.....	Preservation of the remaining undeveloped lands within the primary environmental corridor in natural open space uses	Met	Maintenance of the 273 acres of primary environmental corridor lands within existing public park and open space sites and public acquisition and maintenance of an additional 58 acres of corridor lands in natural open space use; maintenance of 88 acres of corridor lands in natural open space uses through application of appropriate conservancy zoning and other public land use regulations. The remaining 357 acres of corridor lands are in existing urban uses

Source: SEWRPC.

in order to meet the requirement for a scenic drive. As further indicated in Table 14, provision of proposed pedestrian paths linking Cliffside Park and Caledonia Lake Michigan Park, North Beach and Pershing Park, Pershing Park and Meyers Park, Meyers Park and Simonsen Park, Simonsen Park and 17th Street Park, and 17th Street Park and Lakeshore South would meet the identified need to provide continuity between these parks. In addition, the provision of proposed walkways providing access to the Lake Michigan shoreline within Cliffside, Caledonia Lake Michigan, Shoop, and Pershing Parks would also meet an identified need.

As further indicated in Table 14, a need to provide urban parks to serve two areas within the urban portion of the study area was identified. Under the plan, the provision of proposed Park Site B would serve one of the identified need areas, while the provision of an additional urban park located outside the study area would meet the other unserved area. Similarly, provision of facilities at Pershing Park, proposed Park Site A, and proposed Park Site B would serve to meet the identified need to provide certain nonresource-oriented facilities in three separate areas within the urban portions of the study area, while the provision of certain nonresource-oriented facilities at the site proposed to be located outside the study area would serve the remaining identified need for such facilities.

Finally, as indicated in Table 14, a need to preserve the important natural resource features in the primary environmental corridors was identified. Under the plan, the 273 acres of primary environmental corridor lands located within existing public park and open space sites, as well as the 58 acres of corridor lands proposed to be acquired for park and open space uses, would be preserved. In addition, 88 acres of undeveloped lands located within the primary environmental corridors would be preserved through the application of appropriate conservancy zoning and other public land use regulations. It is also important to note that the remaining 357 acres of primary environmental corridor lands in the study are in urban use and would be considered for park and open space uses should such lands become available for public acquisition.

## PLAN IMPLEMENTATION

The recommended plan prepared under the Racine County Lake Michigan public access study provides a design for the attainment of the specific public access outdoor recreation site and facility acquisition and development, and natural resource base protection objectives presented in Chapter III of this report. In a practical sense, however, the recommended plan is not complete until the steps required to implement the plan are specified. The remainder of this chapter, accordingly, is intended to serve as a guide for use in the implementation of the recommended plan. The first section consists of a summary presentation of the framework which enables the implementation of the plan, while the second section presents a description of the specific actions required to implement the plan.

### Legal Framework

There are a variety of measures, both regulatory and nonregulatory, by which units and agencies of government can regulate or otherwise influence the

provision of public access and other outdoor recreation opportunities in the Lake Michigan shoreline area of Racine County. The regulatory measures include primarily the use of zoning ordinances, subdivision control ordinances, and official maps, while the nonregulatory measures consist primarily of land acquisition.

Zoning Ordinances: Under the Wisconsin Statutes, county and local units of government are empowered to prepare and adopt zoning ordinances which regulate the uses of land and, in addition, regulate such aspects of development as the size of lots and the placement of structures on the lots. As noted in Chapter II of this report, zoning ordinances are presently in effect in each of the five minor civil divisions that have jurisdiction in the Racine County Lake Michigan shoreland study area. The City of Racine, the Villages of North Bay and Wind Point, and the Town of Mt. Pleasant have adopted and currently administer their own zoning ordinances. The Town of Caledonia has adopted the Racine County zoning ordinance, which is administered for the Town of Caledonia by the Racine County Planning and Zoning Department. The Village of Wind Point is currently in the process of preparing a new zoning ordinance and zoning district map. A summary of the requirements of these ordinances is provided in Chapter II of this report.

In addition to comprehensive zoning regulations, the City of Racine, the Village of Wind Point, and Racine County have adopted special floodland regulations which serve to limit filling and development within 100-year recurrence interval flood hazard areas along the Lake Michigan shoreline and along the Root River. As indicated in Chapter II, 100-year recurrence interval flood hazard areas along the Root River were identified by the Regional Planning Commission under the Root River watershed planning program, while flood hazard areas along the other streams in the study area have been delineated under insurance studies conducted by the Federal Emergency Management Agency (FEMA) for the City of Racine, the Village of Wind Point, and the unincorporated areas of Racine County. These flood insurance studies also identify a narrow band along the Lake Michigan shoreline which is subject to inundation by the lake on an average of once every 100 years, and which is also subject to existing county and local floodland zoning regulations.

Racine County has also adopted shoreland zoning regulations which impose special restrictions on the location of certain structures and restrict tree cutting, filling, grading, and certain agricultural practices within shoreland areas of Racine County. County shoreland regulations apply within the unincorporated areas of Racine County to those lands lying within 1,000 feet of the ordinary high-water mark of navigable lakes, ponds, and flowages; and within 300 feet of the ordinary high-water mark of navigable streams, or to the landward side of the floodplain, whichever is greater.

As indicated in Chapter II of this report, an analysis of the local zoning within the shoreland area revealed that generally the remaining wetlands, woodlands, and other open lands having potential for public access and other outdoor recreation and open space use have been placed in zoning districts which permit residential development and are, therefore, subject to conversion to urban use. It is apparent then that if remaining natural resources, public access opportunities, and outdoor recreation resources are to be preserved and utilized for park and open space purposes, modification of the existing zoning

ordinances and zoning district maps will be required. Generally, these modifications will include the incorporation into the existing municipal ordinances of zoning districts which can be used to protect and preserve the important outdoor recreation and open space features in the shoreland study area. Specifically, such modifications would result in the provision and use of the following districts:

1. Lowland conservancy district--this district would be used to protect and preserve surface waters and wetland areas within the shoreland study area. No new urban development would be permitted in this district.
2. Upland conservancy district--this district would be used to protect and preserve significant woodlands, related scenic areas, and marginal farmlands while at the same time allowing for rural estate residential development. This district would provide for a minimum lot size of five acres and would place limits on the removal of natural vegetation.
3. Park and recreation district--this district would be used to preserve the existing private, as well as public, recreational areas and to protect such areas from possible encroachment by incompatible land uses.

The use of each of these districts in implementation of the recommended plan is described in a following section of this chapter.

Subdivision Control Ordinances: Subdivision control ordinances regulate the division of larger tracts of land into lots for urban development. The City of Racine and the Village of Wind Point have each adopted subdivision control ordinances which regulate land subdivisions within the corporate limits and extraterritorial plat approval jurisdictions of the municipalities. Racine County adopted a subdivision control ordinance in 1956, which, under Wisconsin Statutes, regulates land subdivisions within all unincorporated areas of the County. Under Wisconsin Statutes, towns may adopt subdivision control ordinances which parallel, or are more stringent than, the County subdivision control ordinance. The Town of Caledonia has adopted such a subdivision control ordinance, while the Town of Mt. Pleasant has not. The Town of Caledonia subdivision control ordinance adopts by reference the Racine County subdivision control ordinance and sets forth more stringent local requirements for developers with respect to construction and financing of public improvements. It is important to note that Racine County is in the process of preparing a new subdivision control ordinance. It is also important to note that the applicability of existing subdivision control regulations within the shoreland area is limited because of the relative scarcity of undeveloped land in the study area. As previously noted, remaining undeveloped lands within the study area are concentrated primarily in the northern portion of the study area in the Town of Caledonia.

Official Maps: Under the Wisconsin Statutes, incorporated municipalities and those towns which have assumed village powers are authorized to prepare an official map. The purpose of the preparation of an official map is to identify and reserve lands for important public facilities, including streets, highways, parkways, and playgrounds. To assure that structures will not be built on land proposed for public facilities which has been identified on the official map, issuance of a building permit is required under the Statutes, and any structure built without such a permit within an area officially mapped for

a public facility will not receive compensation when the land is ultimately required by the municipality. The Village of Wind Point is the only municipality within the study area to have adopted an official map. However, no additional proposed park sites or parkways have been designated on the official map.

Public Acquisition: Public acquisition of land, in full or in partial interest, can be used to ensure the provision of public access and other outdoor recreation opportunities and the preservation of significant environmental lands, and is generally necessary to achieve such purposes in urban and urbanizing areas. Cities, villages, towns, and counties are authorized under State Statutes to acquire and develop properties for public access and other park and recreation purposes. Acquisition through purchase of full fee simple interest in property is the usual means by which local units of government acquire land. County and local units of government have traditionally relied on state and federal assistance to help finance the acquisition and development of park and open space sites and facilities. As a result of state and federal fiscal constraints, however, the most important local recreation aid programs--the State Outdoor Recreation Action Program (ORAP) and the Federal Land and Water Conservation Program (LAWCON)--are not operative at the present time. The local park aid provisions of the ORAP program recently expired, and no money has been appropriated for local aids under the LAWCON program for fiscal year 1981-1982.

In view of the scarcity of state and federal public access and outdoor recreation aids, and the growing fiscal constraints faced by all the local units of government, alternatives to the usual purchase of the fee simple interest in land may be necessary. Acquisition of less-than-fee simple interest may be in the form of scenic easements for vista protection, conservation easements for natural resource preservation, and riparian rights for provision of erosion control measures and public access. It should also be noted that lands for access, outdoor recreation, and resource preservation can also be acquired by public agencies through private gifts and donations.

### Implementation Activities

The plan for the provision and enhancement of public access to Lake Michigan recommended herein provides for the attainment of the specific public access and other outdoor recreation and open space objectives formulated under the study. The plan consists of five major elements--a Cliffside Park-Caledonia Lake Michigan Park element; a Racine waterfront parks element; an additional Lake Michigan parks element; an outdoor recreation trails and routes element; and a natural resource preservation element. The responsibilities of each unit and agency of government having jurisdiction within the shoreland study area for the implementation of the plan recommendation for each element, as well as the summary of plan implementation costs, are presented in this section.

With respect to implementation of the Cliffside Park-Caledonia Lake Michigan Park plan element, it is recommended that both parks concerned be expanded through the acquisition of additional land; that a variety of trail facilities including hiking, biking, and nature study trails be developed; and that direct water access facilities be developed. Under this proposal, the Racine County Park Department would acquire 315 acres of additional land located



generally north and west of Cliffside Park at an estimated cost of \$1,375,000; while the Town of Caledonia would acquire an additional 13 acres of land located along the Lake Michigan shoreline south of Caledonia Lake Michigan Park at an estimated cost of \$26,000.

The Racine County Park Department would also continue the development of Cliffside Park, including the development of the proposed Cliffside Park addition, by providing a variety of trail facilities, picnic areas, and related support facilities at an estimated cost of \$640,000. In addition, under this proposal, the Park Department would also prepare the necessary master development plan and detailed facility development plans. It is also envisioned that a detailed study concerning the development of the proposed nature center and nature trail facilities would be prepared. The County Park Department would also direct the conduct of a detailed planning and engineering study to determine the feasibility of provision of the boat launching facilities proposed to be located in the ravine south of the National Guard target range site in the northeast corner of the proposed Cliffside Park addition.

The Town of Caledonia would be responsible for the structural improvements required to stabilize the bluff and shoreline within both Caledonia Lake Michigan Park and the proposed addition to the park. As part of the preparation of the plans for structural improvement, the Town would consider the provision of direct access to Lake Michigan for such activities as swimming, fishing, and other beach activities, as well as needed park support facilities such as landscaping, parking, and rest room facilities at an estimated cost of \$39,000. In addition, the Town would coordinate the park development effort with the County and cooperate in the provision of a pedestrian link between Caledonia Lake Michigan Park and Cliffside Park. Finally, the Town, in cooperation with Racine County, would place Caledonia Lake Michigan Park and the proposed additions to Cliffside Park and Caledonia Lake Michigan Park in a park and recreation zoning district.

With respect to the Racine waterfront parks plan element, it is recommended that a variety of Lake Michigan-related outdoor recreation facilities be provided, including additional boat launch ramp lanes and related facilities, a special activities area to accommodate special events, a variety of trails and walkways for pedestrian use, and other facilities for such activities as swimming, fishing, and picnicking at an estimated cost of \$415,000. Under this proposal, the City would prepare a detailed development plan for the provision of such facilities in accordance with the design guidelines prepared under the Lake Michigan public access study and set forth in the description of the Racine waterfront parks plan element. This detailed plan should include the facilities proposed under the Lake Michigan public access study, and should include the additional facilities proposed in the conceptual diagram prepared by the consultant to the City of Racine. In addition, as part of the preparation of the more detailed plans, the City should consider provision of public access to the Lake Michigan shoreline between the southern end of North Beach and the northern end of Pershing Park in order to provide a continuous strip of public land along the City of Racine Lake Michigan shoreline between Lakeshore North and Lakeshore South. Finally, the City should place all of the existing parks comprising the Racine waterfront parks complex as well as, importantly, any proposed additional parklands along or adjacent to the Lake Michigan shoreline east of the harbor and along or adjacent to the shore of the Root River, in a park and recreation zoning district.

With respect to the other Lake Michigan parks plan element, it is recommended that additional facilities providing access to Lake Michigan be developed at Shoop Park and Lake Park, and that two additional sites along the Lake Michigan shoreline be acquired and developed for public access and outdoor recreation purposes. It is further recommended that a site providing opportunities for intensive, nonresource-oriented outdoor recreation activities be provided outside the study area to serve the residents of an urban portion of the study area. Under this proposal, the City of Racine would provide hiking and pedestrian paths within and adjacent to the picnic area at Shoop Park to provide access to the Lake Michigan shoreline at an estimated cost of \$10,000, while the Village of Wind Point would place the park in a new park and recreation zoning district. In addition under this proposal, the Town of Mt. Pleasant would provide an area for passive recreation at Lake Park at an estimated cost of \$10,000, and would place Lake Park in a new park and recreation zoning district.

The City of Racine would place the proposed Park Site A in a park and recreation zoning district; would acquire the six-acre site at an estimated cost of \$120,000; and would prepare a master plan and develop lakeshore facilities and other park facilities, including an area for passive recreation, playfield and playground areas, and necessary support facilities at an estimated cost of \$100,000. The Racine County Park Department would acquire the seven-acre proposed Park Site B at an estimated cost of \$140,000; and prepare a master plan and develop facilities at the site, including facilities for passive recreation and playfield and playground areas, as well as support facilities at an estimated cost of \$100,000. The Town of Mt. Pleasant would place the site in a new park and recreation zoning district. It is important to note that the Town of Mt. Pleasant, on lands leased from the County, developed the outdoor recreation facilities at Stuart-McBride Park. Similarly, since proposed Park Site B is located in an area proposed for urban development within the Town of Mt. Pleasant and would serve residents of the Town, the Racine County Park Department and the Town of Mt. Pleasant may decide to cooperate in the development of proposed Park Site B. Indeed, it would be appropriate for the Town to take the lead in acquisition and development of the site if urban development in the vicinity of the site requires the provision of local town park and open space facilities. Finally, it is envisioned that the Town of Caledonia would acquire and develop an additional town park located outside the study area which would provide facilities for intensive, nonresource-oriented outdoor recreation activities to serve the needs of residents of the Town in an unserved portion of the Racine County Lake Michigan public access study area. The precise location and size of this proposed site would be determined on the basis of a more detailed facilities planning effort as additional urban development occurs within and adjacent to U. S. Public Land Survey Section 17, Township 4 North, Range 23 East, in the Town of Caledonia.

With respect to the outdoor recreation trails plan element, it is recommended that a variety of trail facilities, including a pleasure drive, a bicycle route, and hiking paths be provided within and adjacent to the shoreland study area. Under this proposal, a pleasure driving route over existing public roadways linking Cliffside Park, Shoop Park, proposed Park Site A, the Racine waterfront parks, and proposed Park Site B would be identified and marked, and the units and agencies of government having jurisdiction over the identified public roads comprising the route would cooperate to develop and put in place as needed uniform route markers. In addition, the City of Racine would consider the development of a continuous 2.5-mile scenic drive between Lakeshore

North and Meyers Park as part of the preparation of the detailed facility plans for the Racine waterfront parks. In this regard, the City would develop a drive between North Beach and the northern portion of Pershing Park which would provide a continuous view of the Lake Michigan shoreline, the Root River, or parks located adjacent to the Lake Michigan shoreline and the Root River as part of the redevelopment effort for this portion of the City.

The City of Racine and Racine County would maintain the existing bike routes within and adjacent to the study area. In addition, the Racine County Park Department would identify a bicycle trail segment which would link Cliffside Park to Bender Park in Milwaukee County, and would develop the portion of that trail segment between the northern terminus of the existing bike trail and the Racine County-Milwaukee County line at an estimated cost of \$30,000. It is envisioned that the Milwaukee County Park Commission would develop that portion of the bicycle trail segment between the Racine County-Milwaukee County line and Bender Park. In addition, under this proposal, the City of Racine would identify and designate a bicycle route between proposed Park Site A and Lakeshore North. Finally under this proposal, facilities for bicyclists, including rest room facilities and picnic areas, would be provided at all park sites along the bicycle route. Specifically, such facilities would be provided at Cliffside Park by the Racine County Park Department and at Shoop Park, proposed Park Site A, and the Racine waterfront parks by the City of Racine.

Finally under the outdoor recreation trails plan element, pedestrian paths would be provided within large parks having frontage along the Lake Michigan shoreline and between adjacent parks along the shoreline. Specifically, the Racine County Park Department and the Town of Caledonia would cooperate to provide a pedestrian path between Cliffside Park and Caledonia Lake Michigan Park; the City of Racine and the Village North Bay would cooperate to provide a pedestrian path between the Village of North Bay Park and proposed Park Site A; and the City of Racine would provide a pedestrian path between proposed Park Site A and the Racine waterfront park. In addition, the City of Racine would provide pedestrian paths within the Racine waterfront parks, including a designated pedestrian way linking North Beach with Pershing Park, North Beach with the Racine Yacht Club, Pershing Park with Meyers Park, Meyers Park with Simonsen Park, Simonsen Park with 17th Street Park, 17th Street Park with Lakeshore South, and Lakeshore South with Roosevelt Park at an estimated cost of \$230,000. In addition, as previously noted, the City would provide a path along the Lake Michigan shoreline in Shoop Park, while the County would provide hiking opportunities in Cliffside Park and the Town of Caledonia would provide such opportunities in Caledonia Lake Michigan Park.

With respect to the natural resource preservation plan element, it is recommended that the remaining nonurban land within the designated primary environmental corridor be preserved in essentially natural, open space uses and that the fully developed portions of the corridor be managed to ensure appropriate consideration of the underlying ecological, scenic, and recreational values. Under this proposal, both regulatory and nonregulatory measures would be utilized to preserve the primary environmental corridor lands. With respect to nonregulatory measures, public acquisition represents perhaps the surest way to preserve such lands. As previously noted, approximately 273 acres, or 35 percent of the 776 acres of primary environmental corridor lands within the study area, are held in public ownership. In addition, under the recommendations set forth in the Cliffside Park-Caledonia Lake Michigan Park plan

element, the Racine waterfront parks plan element, and the other Lake Michigan shoreland parks plan element, a combined total of 58 additional acres of land within the primary environmental corridor would be acquired for public park and open space preservation uses. As previously noted, these lands would also be placed in the park and recreation district--which would serve to protect and preserve the character of the existing natural resources, permit the provision of compatible outdoor recreation facilities, and prohibit urban and other incompatible uses--by the appropriate unit or agency of government having jurisdiction of the location of the existing and proposed additional public park and open space sites.

Generally, regulatory measures would be utilized to preserve primary environmental corridor lands held in private ownership. Remaining wetlands within the primary environmental corridor--which are located primarily in the major ravines of the study area--would be placed in a lowland conservancy district, which would serve to preserve the wetland areas and prohibit their destruction through the intrusion of incompatible urban development. Remaining woodlands within the primary environmental corridor would be placed in an upland conservancy district, which would serve to protect and preserve significant woodlands while allowing for low-density urban residential development.

With regard to developed lands within the primary environmental corridor, it should be noted that the county shoreland zoning regulations already contribute to the preservation of the natural resource features within the shoreland area--that is, those areas within 1,000 feet of the ordinary high-water mark. County shoreland zoning regulates tree cutting and shrubbery removal within the area; and, moreover, virtually any man-made alteration of the shoreland area is a conditional use, subject to county review. It is important to note that these county shoreland zoning regulations are applicable only to the shoreland of the unincorporated areas of Racine County, which consist of the lands located within the Town of Caledonia and the Town of Mt. Pleasant. Therefore, even though most of the primary environmental corridor lands located within the incorporated portion of the study area are already intensively developed, each incorporated municipality within the study area should adopt protective shoreland zoning regulations which would contribute to the preservation and enhancement of underlying ecological and scenic values--including existing vegetative cover and areas of steep slope--along the Lake Michigan shoreline. Such shoreland zoning could regulate the placing of additional structures and restrict tree cutting and shrubbery removal, filling, and grading within this area, thereby preserving the remaining shore cover and scenic beauty of the coastal area, as well as minimizing shoreland use. It is important to note that such provisions have been included in the draft of the proposed new zoning ordinance for the Village of Wind Point.

The specific responsibilities for protection and preservation of primary environmental corridors rests with the municipality within the shoreland study area in which these environmental corridor lands are located. About 331 acres, or 43 percent of the 776 acres of primary environmental corridor, are held or proposed to be held in public ownership and should be placed in the park and recreation zoning district. A combined total of 88 acres, or 11 percent of the primary environmental corridor land, are not yet developed, and would be preserved in the lowland conservancy and upland conservancy districts. The remaining 357 acres, or 46 percent of the primary environmental corridor lands, are developed for intensive urban uses, and would be protected under

the existing county ordinance in the Towns of Mt. Pleasant and Caledonia; and would be protected in the City of Racine and the Villages of North Bay and Wind Point through the adoption of shoreland zoning regulations which would regulate the placement of structures and restrict other activities within the Lake Michigan shoreland area.

A summary of the capital expenditure costs, estimated in 1980 dollars, required to implement each element of the recommended plan is presented in Table 15. As indicated in Table 15, a total of \$3,235,000 would be expended for the acquisition and development of public access and other outdoor recreation and open space facilities proposed to be provided under the plan. About \$2,285,000, or 71 percent of the plan costs, would be incurred by Racine County; about \$875,000, or 27 percent, by the City of Racine; about \$65,000, or 2 percent, by the Town of Caledonia; and \$10,000, or less than 1 percent, by the Town of Mt. Pleasant. No capital expenditures would be required by the Villages of Wind Point or North Bay. It should be noted that the costs associated with the development of facilities proposed by the consultant to the City of Racine at the waterfront parks and costs associated with bluff and shoreline stabilization have not been included in these cost estimates.

As further indicated in Table 15, about \$2,080,000, or 64 percent, would be expended to acquire additional lands at Cliffside Park and Caledonia Lake Michigan Park and develop additional facilities at these parks; about \$415,000, or 13 percent, would be expended to develop additional facilities recommended under this plan in the Racine waterfront parks plan element; about \$480,000, or 15 percent, would be expended to develop other existing Lake Michigan parks as well as to acquire and develop the two proposed additional parks along the Lake Michigan shoreline; and about \$260,000, or 8 percent, would be expended for the development of outdoor recreation trails. It is important to note that, while no capital expenditure in addition to the acquisition of proposed park sites is required to implement the resource preservation plan element, each unit of government having jurisdiction in the shoreland study area would have to assume responsibility for amending its respective zoning ordinances in order to assure the preservation of the natural resource features located in the primary environmental corridor.

Table 15

**SUMMARY OF ACQUISITION AND DEVELOPMENT COSTS UNDER THE  
RECOMMENDED PUBLIC ACCESS PLAN FOR THE RACINE  
COUNTY LAKE MICHIGAN SHORELAND STUDY AREA**

Plan Element	CIVIL DIVISION					
	Racine County		City of Racine		Village of North Bay	
	Cost	Percent	Cost	Percent	Cost	Percent
Cliffside Park and Caledonia Lake Michigan Park....	\$2,015,000 <sup>a</sup>	62.3	\$ --	--	\$ --	--
Racine Waterfront Parks.....	--	--	415,000 <sup>c</sup>	12.9	--	--
Other Lake Michigan Parks.....	240,000 <sup>d</sup>	7.4	230,000 <sup>e</sup>	7.1	--	--
Outdoor Recreation Trails.....	30,000 <sup>g</sup>	0.9	230,000 <sup>h</sup>	7.1	--	--
Natural Resource Preservation....	--	--	--	--	--	--
<b>Total</b>	<b>\$2,285,000</b>	<b>70.6</b>	<b>\$875,000</b>	<b>27.1</b>	<b>\$ --</b>	<b>--</b>

Plan Element	CIVIL DIVISION					
	Town of Caledonia		Town of Mt. Pleasant		Total	
	Cost	Percent	Cost	Percent	Cost	Percent
Cliffside Park and Caledonia Lake Michigan Park....	\$65,000 <sup>b</sup>	2.0	\$ --	--	\$2,080,000	64.3
Racine Waterfront Parks.....	--	--	--	--	415,000	12.9
Other Lake Michigan Parks.....	--	--	10,000 <sup>f</sup>	0.3	480,000	14.8
Outdoor Recreation Trails.....	--	--	--	--	260,000	8.0
Natural Resource Preservation....	--	--	--	--	--	--
<b>Total</b>	<b>\$65,000</b>	<b>2.0</b>	<b>\$10,000</b>	<b>0.3</b>	<b>\$3,235,000</b>	<b>100.0</b>

<sup>a</sup>Includes acquisition of 315 acres of land at an average cost of about \$4,400 per acre and development of nature center, hiking, biking, ski touring, and horseback riding trails, picnic areas and playgrounds, and related support facilities.

<sup>b</sup>Includes acquisition of 13 acres of land at an average cost of \$2,000 per acre and development of hiking trails, picnic areas, and related support facilities.

<sup>c</sup>Includes the development of additional boat launch ramp lanes and a special activities area at Pershing Park, a picnic area and beach-related facilities at Meyers Park, and general landscaping and park support facilities along the waterfront parks.

<sup>d</sup>Includes acquisition and development of proposed Park Site B.

<sup>e</sup>Includes acquisition and development of proposed Park Site A and development of a pedestrian path along Lake Michigan at Shoop Park.

<sup>f</sup>Includes the development of a picnic area and general landscaping at Lake Park.

<sup>g</sup>Includes the development of a 1.5-mile bikeway segment.

<sup>h</sup>Includes the development of all trail facilities in the Racine waterfront parks.

Source: SEMRPC.

## Chapter VI

### SUMMARY AND CONCLUSIONS

#### INVENTORY FINDINGS

The Lake Michigan shoreland is an area which provides a unique setting for a variety of outdoor recreation activities. Recognizing this, Racine County and the coastal communities of Racine County have acquired significant portions of the Lake Michigan shoreline for park and public open space purposes, thereby providing opportunities for nonriparian residents and other citizens, as well as riparian owners, to pursue recreational activities within the coastal environment. Because of the extensive urban development which exists along the Lake Michigan shoreland of Racine County, there remains relatively little undeveloped shoreland which can be used to provide additional shoreland recreational opportunities in the future. Moreover, pressures to allocate the remaining undeveloped shoreland areas to intensive urban land uses threaten the availability of those lands for future recreation and open space use. The increasing competition for coastal resources in the face of the relative scarcity of undeveloped land within the coastal area indicated a need to prepare a public recreation access plan for the Racine County shoreland area. Given the need, Racine County in February 1981, requested and subsequently received a grant from the Wisconsin Coastal Management Council in partial support of the conduct of a Lake Michigan public access study to prepare the needed plan. The County then retained the Southeastern Wisconsin Regional Planning Commission as a consultant to conduct the necessary work. The study was carried out by the staff of the Regional Planning Commission working in cooperation with the staff of the County Planning and Zoning Department and a technical advisory committee consisting of representatives from Racine County, local units of government within the shoreland area, conservation groups, and the Wisconsin Department of Natural Resources.

The study is concerned with the provision of opportunities for participation by the public in a broad range of outdoor recreation activities both on Lake Michigan surface waters and on adjacent shorelands. Outdoor recreational activities in the coastal area range from swimming and sail boating, to passive activities such as sight-seeing from scenic overlooks. These activities may be broadly classified as water-dependent activities which require direct access to surface waters and nonwater-dependent activities which do not require direct access to surface waters, but which may be significantly enhanced when pursued in a coastal environment. For purposes of this study, public access sites and facilities are defined as outdoor recreation sites and facilities--either publicly held or privately held but open to the public--through which the public can participate in water-dependent and nonwater-dependent outdoor recreation activities on Lake Michigan and adjacent shoreland areas. Accordingly, the primary purpose of the study is the development of a plan to guide Racine County and the concerned units and agencies of government in the maintenance of existing and the acquisition and development of new sites and facilities to accommodate public recreational access to the Lake Michigan shoreland within Racine County.

For purposes of the study, the Lake Michigan shoreland area was defined as that area lying within approximately 1,000 feet of the ordinary high water

mark of Lake Michigan and certain lands located along the Root River east of the Marquette Street bridge, totaling 2,552 acres in size. Much of this area is committed to urban land uses and little undeveloped open land remains in the shoreland area. A total of 1,429 acres or 56 percent of the 2,552-acre shoreland study area was devoted to urban uses in 1980. These uses included residential, commercial, industrial, transportation, and governmental and institutional uses. Recreational uses comprised an additional 414 acres, or 16 percent of the total area. Remaining undeveloped lands, including wetlands, woodlands, and agricultural and other open lands, comprised 672 acres, or 26 percent of the total area. Surface waters consisting primarily of the Root River accounted for the balance--37 acres, or about 2 percent--of the shoreland area.

A large portion of the shoreland area--2,331 acres, or 91 percent of the area--has been placed in zoning districts which permit residential, commercial, industrial, and governmental and institutional development. The largest single zoning category is residential which encompasses 1,094 acres, or 43 percent of the shoreland study area. Lands placed in districts which allow urban development account for 13.6 linear miles, or 95 percent of the total 14.4 linear miles of Lake Michigan shoreline in Racine County.

Surface waters consisting primarily of Lake Michigan, the Root River, and the minor streams directly tributary to Lake Michigan form a particularly important element of the natural resource base of the shoreland study area. The contribution of these surface waters to the economic development, recreational opportunities, and aesthetic quality of the shoreland area is substantial. The shoreland area includes a portion of the Root River estuary, as well as all or portions of two unnamed perennial streams and seven unnamed intermittent streams.

Beaches in Racine County generally consist of sand and gravel and range in width from a few feet in some reaches of the shoreland area to 500 feet in North Beach which is located north of the northern breakwater of Racine harbor. Beaches are nonexistent along many reaches of the Racine shoreland, including the area within the harbor breakwater and the shoreland areas adjacent to the City of Racine sewage treatment plant, Pershing Park and the Wisconsin Electric Power Company tract.

Much of the Lake Michigan shoreline in Racine County is bordered by bluffs. Bluff heights vary considerably from reach to reach, with the highest bluffs of more than 80 feet in height found along the shoreline north of Cliffside Park. Bluff erosion is a significant problem along portions of the Lake Michigan shoreland in Racine County and is a major consideration in evaluation of the recreational development potential of remaining open space land along the Lake Michigan shoreland.

While relatively scarce, woodlands and wetlands remain important natural resources within the shoreland area. Woodlands cover about 146 acres, or 6 percent of the shoreland area, while wetlands cover about 50 acres, or 2 percent of the study area. Most of the remaining woodlands and wetlands within the shoreland area are found north of Four Mile Road in the Town of Caledonia.

In recognition of the underlying recreational, aesthetic, and ecological values, a primary environmental corridor has been delineated along the entire



Lake Michigan shoreline within Racine County. This corridor includes many parks, historic sites, scenic viewpoints, wetlands, and woodlands which have been identified within the shoreland study area. Thus, the primary environmental corridor encompasses 776 acres, or about 30 percent of the shoreland study area.

Existing public parks in the Racine County shoreland area provide for a variety of resource-oriented outdoor recreation opportunities, including opportunities for activities such as boating, camping, fishing, picnicking, swimming, and passive recreational activities. There are 23 public park sites totaling 480 acres, or about 19 percent of the total study area. The combined Lake Michigan shoreland frontage within existing parks totals 4.83 miles, or 34 percent of the total length of the Lake Michigan shoreland of Racine County. The City of Racine parks comprise 3.33 miles, or 69 percent of the total area devoted to public outdoor recreation uses. Cliffside Park, owned by Racine County, accounts for an additional 0.72 mile, or 15 percent of the total frontage in public outdoor recreation use. The remaining 0.78 mile, or 16 percent, consist of village and town parklands and a school recreation site.

As part of an inventory of potential park and open space sites conducted under the study, a total of 24 parcels were identified and the suitability of each site for development of outdoor recreation facilities was evaluated. Potential sites were generally small, with only six sites being greater than five acres in size and only two sites being greater than 25 acres in size. An evaluation of the recreational development potential of the sites indicated that 21 sites were suitable for the provision of scenic overlook and passive recreational areas; 19 sites were suited for picnic activities; and 19 sites encompassed open level areas which could be used for active outdoor recreational pursuits. Conversely, the potential for providing additional water-dependent activities was limited with only four sites found suitable for swimming, five sites for beach activities, and seven sites for fishing.

Roadways located within the study area adjacent to the shoreland area total 22.6 miles in length. Only a small portion--3.7 miles, or 11 percent--of this network, however, provided a clear unobstructed view of Lake Michigan indicating that the development of the continuous pleasure driving or biking route along the Lake Michigan shoreland would be difficult.

## PUBLIC OUTDOOR RECREATION ACCESS OBJECTIVES

Planning is a rational process for formulating objectives and the preparation and implementation of plans meeting those objectives. Formulation of objectives, therefore, is an essential task which must be undertaken before plans could be prepared. The technical advisory committee for the Racine shoreland public access study utilizing regional park and open space objectives provided by the Commission under previous studies as a point of departure, modified and expanded such objectives to fully reflect local as well as regional needs and values relating to public access to the Lake Michigan shoreland in Racine County. Especially important was the identification of an additional objective which recommended the provision of an integrated system of park and public open space site facilities within and related to the natural features of the Lake Michigan shoreland within the Racine County area. Complementing this

objective were a set of standards which specified: the minimum proportion of shoreland within Racine County which should be maintained in public park and open space use; intervals for the provision of swimming beaches, areas for beach activities, and passive recreational areas for picnicking, rest, and reflection; criteria for the provision of the routes for pleasure driving, biking, and hiking paths; and guidelines with respect to the provision of such facilities so as to minimize the disruption of the natural resource base within the shoreland area.

## APPLICATION OF OBJECTIVES AND STANDARDS

Application of the agreed-upon park site and recreational facility objectives and standards within the Lake Michigan shoreland study area indicated deficiencies in the existing system of resource-oriented sites, facilities for intensive resource-oriented activities, recreation trails and routes, and urban park and open space sites and facilities. With respect to resource-oriented sites, the application of the standards indicated a need for the provision of additional land at Cliffside Park and provision of additional shoreline frontage within selected sites along Lake Michigan. With respect to facilities for intensive resource-oriented activities, the application of standards indicated a need for swimming facilities in two reaches of shoreline presently lacking such swimming facilities; the need for a beach in two reaches of shoreline lacking beach facilities; the need for additional boat slips and launch ramp lanes in the Racine harbor, as well as the need for boat launch facilities in one reach of the shoreline lacking such facilities; the need for a passive recreation area in one reach of the shoreline lacking such facilities; and the need for a nature center at Cliffside Park. With respect to recreation trails and routes, the application of the standards indicated a need to provide a designated pleasure drive within and adjacent to the study area, the need for a continuous 2.5-mile scenic route having an unobstructed view of Lake Michigan and parks along the Lake Michigan shoreline, and the need for walkways within four existing parks and between selected adjacent parks. With respect to urban park and open space sites and facilities, the application of the standards indicated the need to provide urban parks to serve two areas within urban portions of the study area not presently served, and the need to provide selected nonresource-oriented facilities to serve four areas within urban portions of the study area not currently having such facilities. In addition, a need to preserve the remaining natural resource features, especially those features located within the primary environmental corridor, in natural open space use was identified.

## PLAN RECOMMENDATIONS AND IMPLEMENTATION

A plan was formulated to meet the identified needs for the provision of public access and other outdoor recreation and open space facilities within the Racine County Lake Michigan shoreland study area. The plan consists of five major elements--a Cliffside Park-Caledonia Lake Michigan Park element; a Racine waterfront parks element; an additional Lake Michigan parks element; an outdoor recreation trail and routes element; and a natural resource preservation element. The units and agencies of government having jurisdiction within the shoreland area are primarily responsible for the implementation of the plan recommendations.

With respect to implementation of the Cliffside Park-Caledonia Lake Michigan Park plan element, it is recommended that both parks concerned be expanded through the acquisition of additional land; that a variety of trail facilities, including hiking, biking, and nature study trails, be developed; and that certain facilities for direct water access be developed. Under the recommended plan, the Racine County Park Department would acquire 315 acres of additional land located generally north and west of Cliffside Park at an estimated cost of \$1.4 million, while the Town of Caledonia would acquire an additional 13 acres of land located along the Lake Michigan shoreline south of Caledonia Lake Michigan Park at an estimated cost of \$26,000.

The Racine County Park Department would also continue the development of the proposed Cliffside Park addition by providing a variety of trail facilities, picnic areas, and related support facilities at an estimated cost of \$640,000. In addition, the County Park Department would prepare the necessary master development plan and detailed facility development plans. This would include detailed plans for the development of the proposed nature center and nature trail facilities. The County Park Department would conduct an engineering study to determine the feasibility of providing a boat launch facility in the ravine south of the National Guard target range in the northeast corner of the proposed Cliffside Park addition.

The Town of Caledonia would be responsible for the structural improvements required to stabilize the bluff and shoreline within Caledonia Lake Michigan Park and the proposed addition to the park. As part of the preparation of the plans for the structural measures required, the Town would consider the provision of direct access to Lake Michigan for activities such as swimming, fishing, boating, and other beach activities. The Town would also provide needed park support facilities such as landscaping, parking, and rest room facilities at an estimated cost of \$39,000. In addition, the Town would coordinate the park development effort with the County to cooperate in the provision of a pedestrian link between Caledonia Lake Michigan Park and Cliffside Park. Finally, the Town, in cooperation with Racine County, would place Caledonia Lake Michigan Park, Cliffside Park, and the proposed additions to Cliffside Park in a park and recreation zoning district.

With respect to the Racine waterfront parks plan element, it is recommended that a variety of Lake Michigan-related outdoor recreation facilities be provided, including additional boat launch ramp lanes and related facilities, a special activities area to accommodate special events, a variety of trails and walkways for pedestrian use, and other facilities for such activities as swimming, fishing, and picnicking at an estimated cost of \$415,000. Under this proposal, the City would prepare a detailed development plan for the provision of such facilities in accordance with the design guidelines prepared under the Lake Michigan public access study set forth in the description of the Racine waterfront parks plan element.

With respect to the other Lake Michigan parks plan element, it is recommended that additional facilities providing access to Lake Michigan be developed at Shoop Park and Lake Park, and that two additional sites along the Lake Michigan shoreline be acquired and developed for public access and outdoor recreation purposes. The plan further recommends that a site providing opportunities for intensive, nonresource-oriented outdoor recreation activities be provided outside the study area to serve the residents in the urban portion of the

study area in the Town of Caledonia. Under this plan element, the City of Racine would provide hiking and pedestrian paths within and adjacent to the picnic area at Shoop Park to provide access to the Lake Michigan shoreline at an estimated cost of \$10,000, while the Village of Wind Point would place the park in the proposed park and recreation zoning district. In addition, under this proposal, the Town of Mt. Pleasant would provide an area for passive recreational use at Lake Park at an estimated cost of \$10,000, and would place Lake Park in the proposed park and recreation zoning district. The City of Racine would place the proposed new park site located in the northern portion of the City in a park and recreation zoning district; would acquire the six-acre site at an estimated cost of \$120,000; and would prepare a master plan and develop lakeshore facilities and other park facilities--including an area for passive recreation, playfield and playground areas, and the necessary support facilities--at an estimated cost of \$100,000. The Racine County Park Department would acquire the proposed new seven-acre park site in the Town of Mt. Pleasant at an estimated cost of \$140,000; and prepare a master plan and develop facilities at the site--including facilities for passive recreation, playfield and playground areas, and necessary support facilities--at an estimated cost of \$100,000. The Town of Mt. Pleasant would place the proposed park site in a park and recreation zoning district.

With respect to the outdoor recreation trails plan element, it is recommended that a variety of trail facilities, including a pleasure drive, a bicycle route, and hiking paths, be provided within and adjacent to the shoreland study area. Under this proposal, a pleasure driving route over existing public roadways linking Cliffside Park, Caledonia Lake Michigan Park, Shoop Park, the proposed new park site in the City of Racine, the Racine waterfront parks, and the proposed new park site in the Town of Mt. Pleasant would be identified and marked. Units and agencies of government having jurisdiction over the identified public roadway comprising the route would cooperate to develop and put in place, as needed, uniform route markers. In addition, the City of Racine would consider the development of a continuous 2.5-mile scenic drive between Lakeshore North and Meyers Park as part of the preparation of the detailed facility plans for the Racine waterfront parks.

The City of Racine and Racine County would maintain the existing bike routes within and adjacent to the study area. In addition, the Racine County Park Department would identify a bicycle trail segment which would link Cliffside Park to Bender Park in Milwaukee County, and would develop the portion of the trail segment between the northern terminus of the existing bike trail and the Racine County-Milwaukee County line at an estimated cost of \$30,000.

Finally, under the outdoor recreation trails plan element, pedestrian paths would be provided within large parks having frontage along the Lake Michigan shoreline and between adjacent parks along the shoreline. Specifically, the Racine County Park Department and the Town of Caledonia would cooperate to provide a pedestrian path between Cliffside Park and Caledonia Lake Michigan Park; the City of Racine and the Village of North Bay would cooperate to provide a pedestrian path between the Village of North Bay and the proposed new park site in the northern part of the City of Racine; and the City of Racine would provide a pedestrian path between the proposed new city park site and the Racine waterfront parks. In addition, the City of Racine would provide pedestrian paths within the Racine waterfront parks, including a designated pedestrian way linking North Beach with Pershing Park, Pershing Park with

Meyers Park, Meyers Park with Simonsen Park, Simonsen Park with 17th Street Park, 17th Street Park with Lakeshore South, and Lakeshore South with Roosevelt Park, at an estimated cost of \$230,000.

With respect to the preservation of the best remaining elements of the natural resource base, the plan recommends the protection and preservation of the remaining primary environmental corridor lands within the study area. Under the plan, each municipality within the shoreland study area is assigned the responsibility for such preservation through the application of land use regulations. With respect to the corridor lands, about 331 acres, or 43 percent of the 776 acres of primary environmental corridor, are held or proposed to be held in public ownership and should be placed in a park and recreation zoning district. A combined total of 88 acres, or 11 percent of the primary environmental corridor lands as yet not developed for intensive urban uses, are recommended to be preserved through the application of lowland conservancy and upland conservancy districts. The remaining 357 acres, or 46 percent of the primary environmental corridor lands within the study area, are developed for intensive urban uses and are recommended to be protected under the existing County shoreland zoning ordinance in the Towns of Mt. Pleasant and Caledonia. Such lands are recommended to be protected in the City of Racine and the Villages of North Bay and Wind Point through the adoption of shoreland zoning which would regulate the placement of structures, the cutting of trees, and destruction of other vegetation, and restrict other intensive activities within the Lake Michigan shoreland area.

To implement the recommended plan, a total of \$3,235,000 would have to be expended for the acquisition and development of the public access and other outdoor recreation and open space facilities proposed to be provided. About \$2,285,000, or 71 percent, of the plan cost would be incurred by Racine County; about \$875,000, or 27 percent, by the City of Racine; about \$65,000, or 2 percent, by the Town of Caledonia; and \$10,000, or less than 1 percent, by the Town of Mt. Pleasant. No capital expenditures would be required by the Villages of Wind Point or North Bay.

## CONCLUDING REMARKS

While existing park and public open space sites provide significant opportunities for participation by the public in outdoor recreation activities within the Lake Michigan coastal area in Racine County, opportunities for the provision of additional public recreational sites and facilities within the coastal area are limited by a number of factors. Much of the Racine County Lake Michigan shoreland area has already been committed to intensive urban uses and, except for the extreme northern portion of the shoreland area, only small isolated parcels of land remain in an undeveloped state. The small size and physical development limitations, including unstable bluff conditions, limit the recreational development potential of the remaining sites. In addition, the fact that most of the remaining undeveloped sites proposed for acquisition are in urban or urbanizing areas dictates that development of recreational sites and facilities will have to be closely coordinated with neighborhood and community development objectives.

The very scarcity of those remaining undeveloped shoreland areas and the continued pressure to develop remaining areas for alternative uses underscores

the need for the County and municipalities concerned to act now to provide for additional Lake Michigan recreational sites and facilities. The remaining undeveloped lands, limited as they are, may be expected to take on increased importance because they are the only sites available--outside of sites created through expensive urban clearance activities--for accommodating the Lake Michigan-related recreation access and facility needs.

The primary purpose of the Lake Michigan public access study was the preparation of a plan to guide Racine County, and the concerned units and agencies within Racine County, in the acquisition and development of sites and facilities providing public recreational access to Lake Michigan and the Lake Michigan shoreline. Implementation of the recommended plan set forth in this report would result in the provision of a wide variety of public recreational access and other recreational facilities within the Racine County Lake Michigan shoreland study area. Parks would provide opportunities for swimming, boating, fishing, picnicking, and other Lake Michigan-oriented activities; recreation trails and routes would traverse the Racine County shoreline; and a variety of natural resource features would be preserved in natural open space use. The acquisition and development of the proposed sites and facilities as recommended would assure a well-balanced, readily accessible variety of recreation opportunities which meet the needs of the existing and future population of the County, enhance tourism opportunities, and protect the underlying and sustaining natural resource base.

**APPENDICES**

## Appendix A

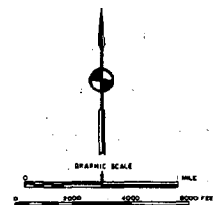
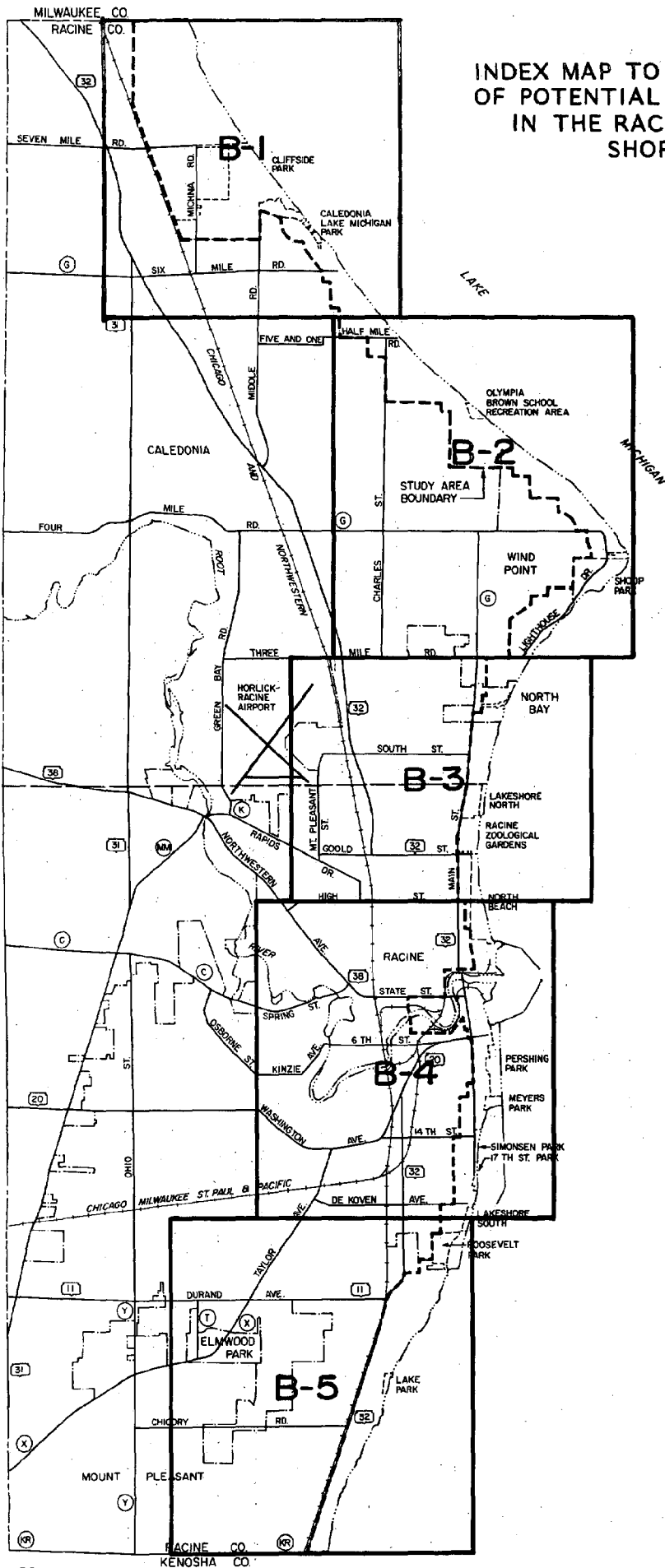
### PLANNING STUDIES DIRECTLY OR INDIRECTLY CONCERNED WITH PUBLIC ACCESS TO THE LAKE MICHIGAN SHORELINE OF RACINE COUNTY

1. Central City Committee, Central City Plan--Racine, Wisconsin, 1970.
2. City Plan Commission and Park and Recreation Commission, Leisure Services for Racine, 1977.
3. Comprehensive Planning Services, Comprehensive Parks and Outdoor Recreation Plan for the Town of Caledonia, 1977.
4. Comprehensive Planning Services, Comprehensive Parks and Outdoor Recreation Plan for the Town of Mt. Pleasant, 1977.
5. Fitzhugh Scott, Architects/Planners, Incorporated, The Northside Redevelopment Plan, 1974.
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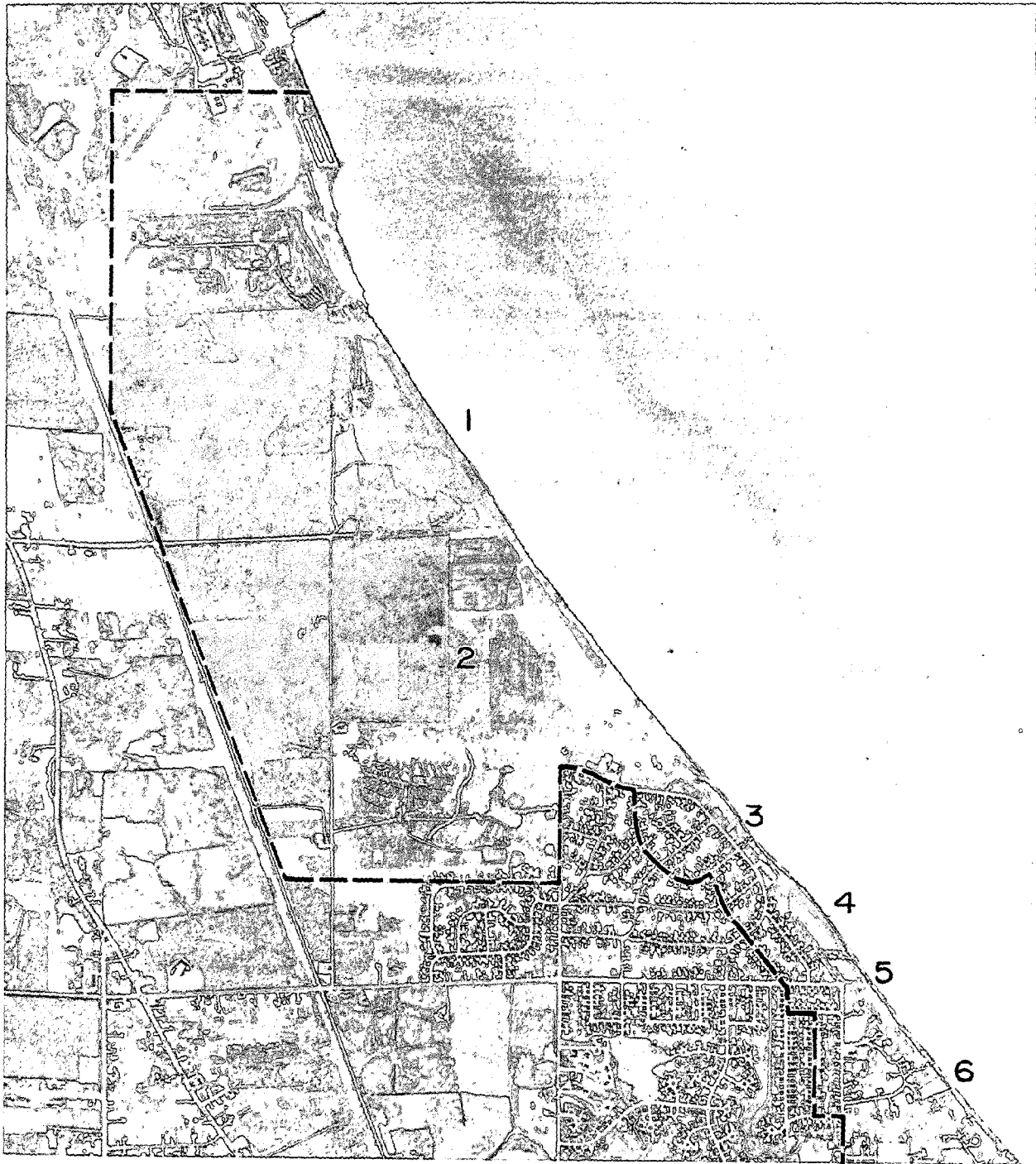
## Appendix B

### INDEX MAP TO MAPS SHOWING THE LOCATION OF POTENTIAL PARK AND OPEN SPACE SITES IN THE RACINE COUNTY LAKE MICHIGAN SHORELAND STUDY AREA



Map B-1

LOCATION OF POTENTIAL PARK AND OPEN SPACE SITES IN  
THE RACINE COUNTY LAKE MICHIGAN SHORELAND STUDY AREA

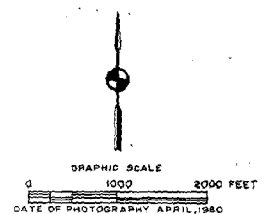


LEGEND

--- STUDY AREA  
BOUNDARY

6 POTENTIAL  
PARK SITE

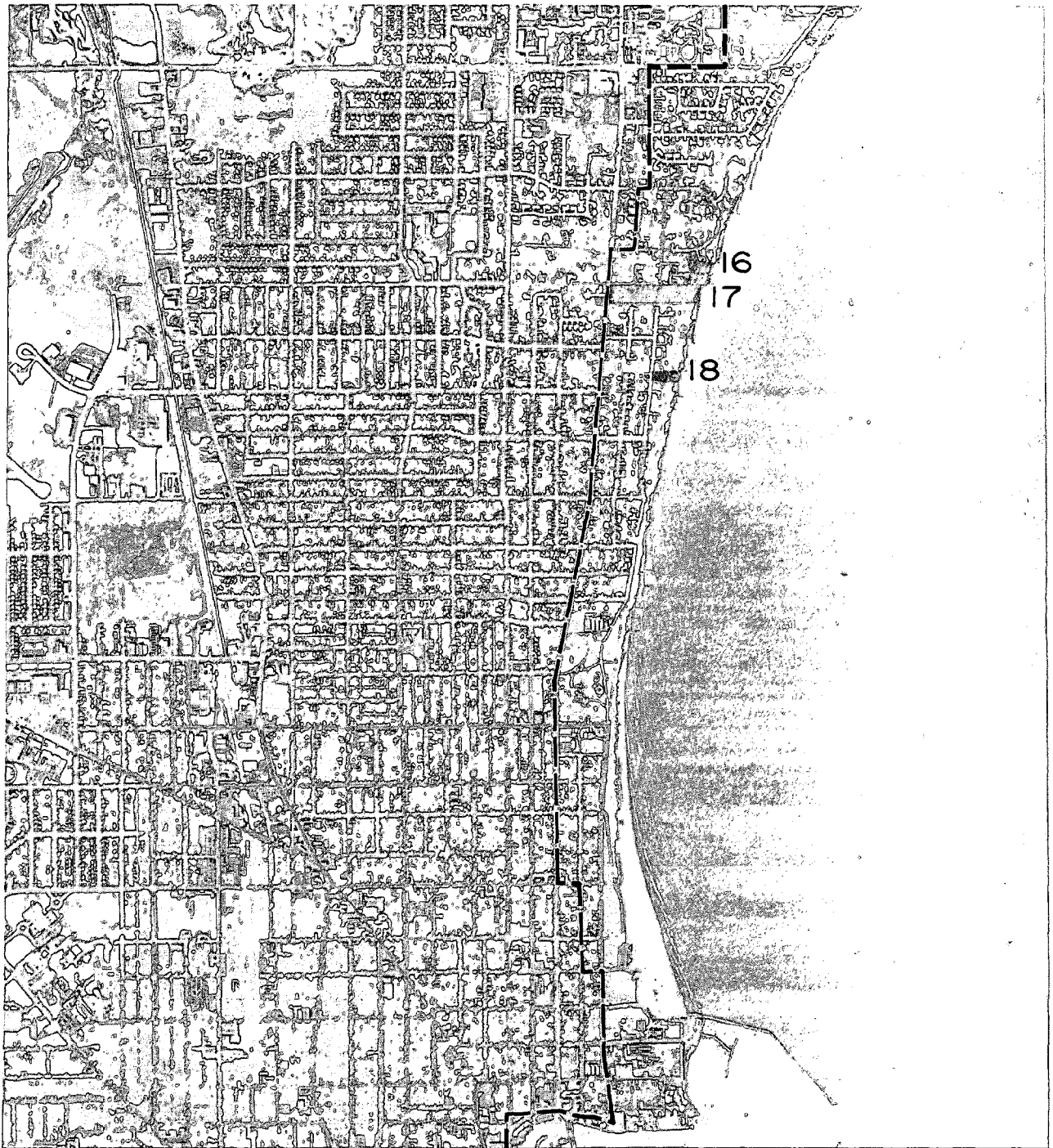
Source: SEWRPC.





Map B-3

LOCATION OF POTENTIAL PARK AND OPEN SPACE SITES IN  
THE RACINE COUNTY LAKE MICHIGAN SHORELAND STUDY AREA

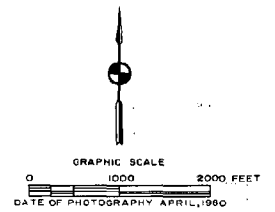


LEGEND

— STUDY AREA  
BOUNDARY

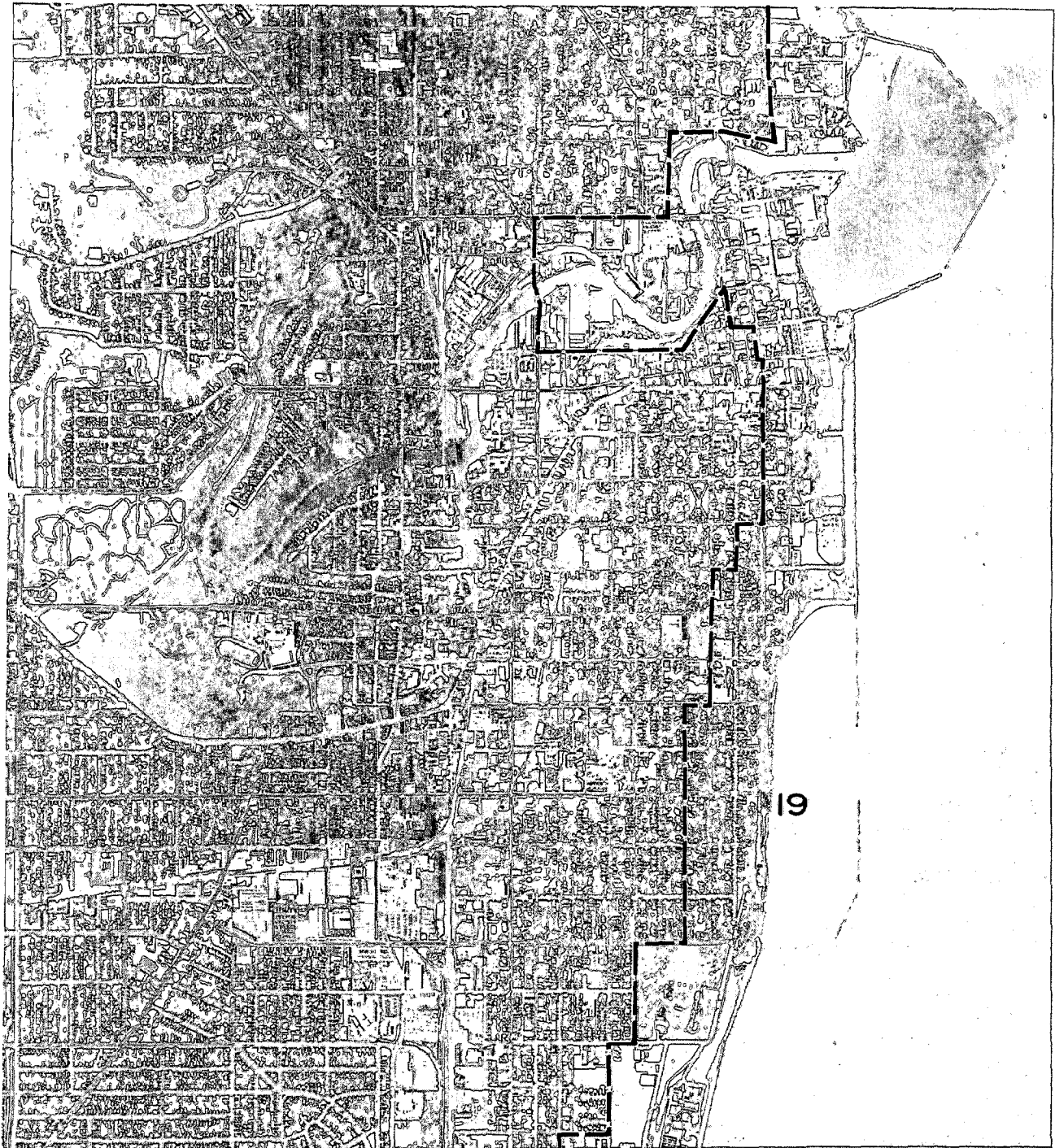
6 POTENTIAL  
PARK SITE

Source: SEWRPC.



Map B-4

LOCATION OF POTENTIAL PARK AND OPEN SPACE SITES IN  
THE RACINE COUNTY LAKE MICHIGAN SHORELAND STUDY AREA

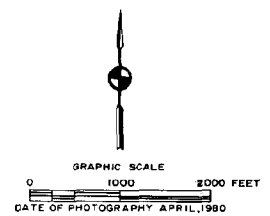


LEGEND

— STUDY AREA  
BOUNDARY

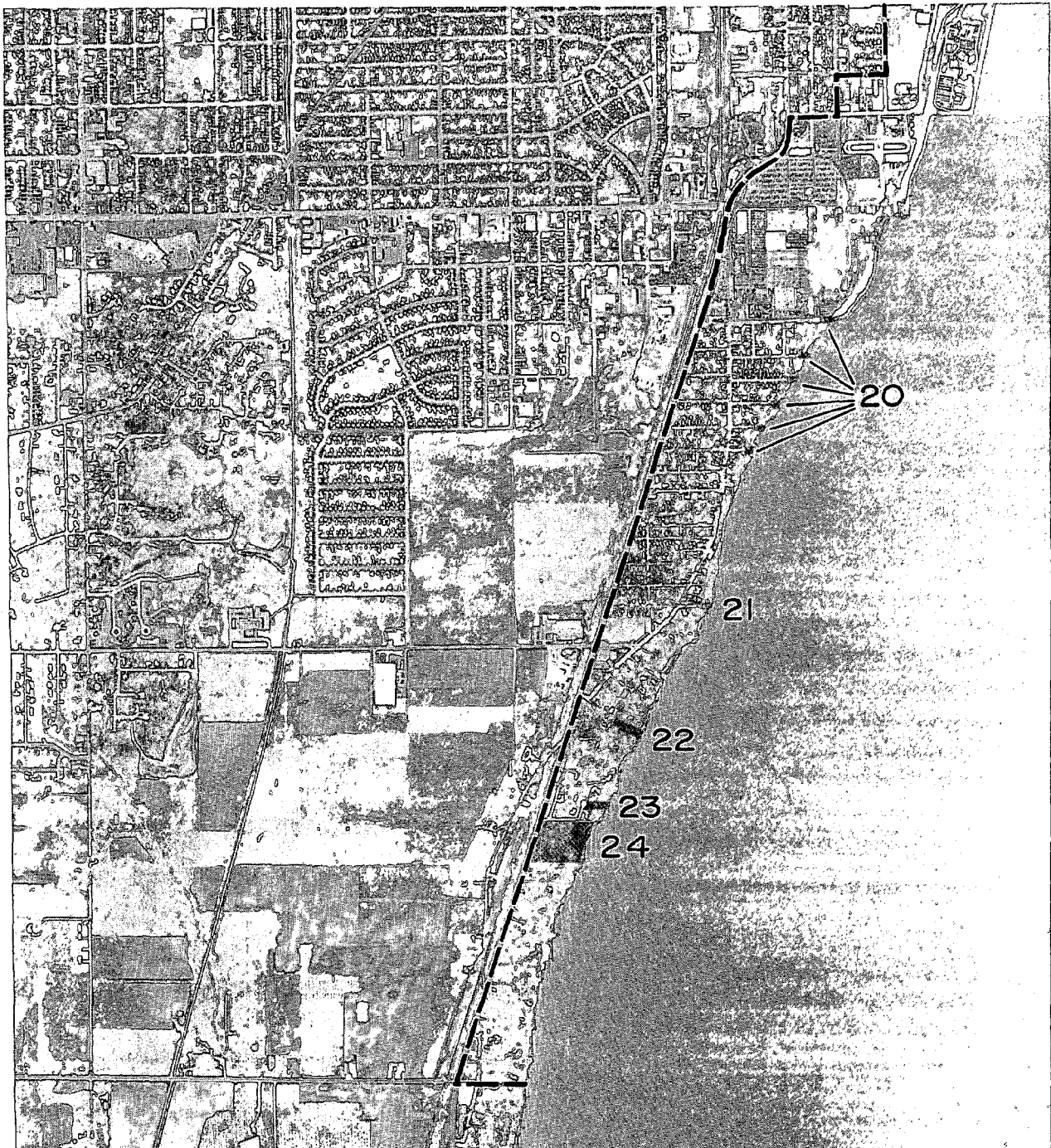
6 POTENTIAL  
PARK SITE

Source: SEWRPC.





LOCATION OF POTENTIAL PARK AND OPEN SPACE SITES IN  
THE RACINE COUNTY LAKE MICHIGAN SHORELAND STUDY AREA

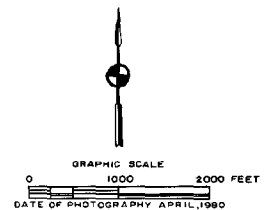


LEGEND

--- STUDY AREA  
BOUNDARY

6 POTENTIAL  
PARK SITE

Source: SEWRPC.



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Special acknowledgement is due Mr. William J. Stauber, Principal Land Use  
Planner and Mr. Gerald H. Emmerich, Jr., Senior Planner, for their contribu-  
tions to the preparation of this report.

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